

**BOBBY JINDAL**  
GOVERNOR



**HAROLD LEGGETT, PH.D.**  
SECRETARY

**State of Louisiana**  
**DEPARTMENT OF ENVIRONMENTAL QUALITY**  
**ENVIRONMENTAL SERVICES**

Certified Mail No.

Activity No.: PER20090006  
Agency Interest No. 2083

Sarah B. Thigpen  
Responsible Care Leader  
Union Carbide Corporation  
PO Box 50  
Hahnville, LA 70057-0050

RE: Part 70 Operating Permit, Union Carbide Corp - St Charles Operations (SCO), Oxide I Plant, Union Carbide Corp, Taft, St. Charles Parish, Louisiana

Dear Ms. Thigpen:

This is to inform you that the permit renewal with modification for the above referenced facility has been approved under LAC 33:III.501. The permit is both a state preconstruction and Part 70 Operating Permit. The submittal was approved on the basis of the emissions reported and the approval in no way guarantees the design scheme presented will be capable of controlling the emissions as to the types and quantities stated. A new application must be submitted if the reported emissions are exceeded after operations begin. The synopsis, data sheets and conditions are attached herewith.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not installed and properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the \_\_\_\_\_ of \_\_\_\_\_, 2015, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and agency interest number cited above should be referenced in future correspondence regarding this facility.

Please be advised that pursuant to provisions of the Environmental Quality Act and the Administrative Procedure Act, the Department may initiate review of a permit during its term. However, before it takes any action to modify, suspend or revoke a permit, the Department shall, in accordance with applicable statutes and regulations, notify the permittee by mail of the facts or operational conduct that warrant the intended action and provide the permittee with the opportunity to demonstrate compliance with all lawful requirements for the retention of the effective permit.

Done this \_\_\_\_\_ day of \_\_\_\_\_, 2010.

CONCLND

c: EPA Region VI

**PUBLIC NOTICE**  
**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY (LDEQ)**  
**UNION CARBIDE CORP -**  
**ST. CHARLES OPERATIONS - OXIDE I PLANT**  
**PROPOSED PART 70 AIR OPERATING PERMIT RENEWAL/MODIFICATION**

The LDEQ, Office of Environmental Services, is accepting written comments on the Part 70 air operating permit renewal and modification for Union Carbide Corp (UCC)- St. Charles Operation, P.O. Box 50 Hahnville, LA 70057-0050 for the Oxide I Plant. **The facility is located at 355 Hwy 3142, Gate 28, Taft, St. Charles Parish.**

UCC, a chemical manufacturing facility, requested to implement the SCO Ethylene Oxide (EO) Refining Expansion Project that will install new equipment to increase EO refining capacity at SCO (purify more EO product). This project will also affect sources in the Oxide II Plant (Permit No. 373-V2) and Site Logistics (Permit No. 2656-V0). Besides purifying more EO at the Oxide I Plant, this modification will permanently shut down the glycol system. The project will also modify and expand existing distillation processes for EO refining. The project will also add a cooling water tower. The Oxide I Plant is currently operating under Permit No. 476-V1, issued January 30, 2007.

This permit was processed as an expedited permit in accordance with LAC 33:I.Chapter 18.

Estimated emissions in tons per year are as follows:

| <u>Pollutant</u>  | <u>Before</u> | <u>After</u> | <u>Change</u> |
|-------------------|---------------|--------------|---------------|
| PM <sub>10</sub>  | 0.12          | 1.27         | +1.15         |
| SO <sub>2</sub>   | 0.06          | 0.05         | -0.01         |
| NO <sub>x</sub>   | 4.03          | 5.82         | +1.79         |
| CO                | 22.17         | 31.66        | +9.49         |
| VOC *             | 30.52         | 36.62        | +6.10         |
| Hydrochloric Acid | -             | 0.02         | +0.02         |

\* Includes 3.53 TPY of Toxic Air Pollutants (TAPs).

A technical review of the working draft of the proposed permit was submitted to the facility representative and the LDEQ Surveillance Division. Any remarks received during the technical review will be addressed in the "Worksheet for Technical Review of Working Draft of Proposed Permit". All remarks received by LDEQ are included in the record that is available for public review.

Written comments, written requests for a public hearing or written requests for notification of the final decision regarding this permit action may be submitted to Ms. Soumaya Ghosn at LDEQ, Public Participation Group, P.O. Box 4313, Baton Rouge, LA 70821-4313. **Written comments and/or written requests must be received by 12:30 p.m., Tuesday, January 19, 2010.** Written comments will be considered prior to a final permit decision.

If LDEQ finds a significant degree of public interest, a public hearing will be held. LDEQ will send notification of the final permit decision to the applicant and to each person who has submitted written comments or a written request for notification of the final decision.

The application, proposed Part 70 air operating permit renewal and modification and statement of basis are available for review at the LDEQ, Public Records Center, Room 127, 602 North 5<sup>th</sup> Street, Baton Rouge, LA. Viewing hours are from 8:00 a.m. to 4:30 p.m., Monday through Friday (except holidays). **The available information can also be accessed electronically on the Electronic Document Management System (EDMS) on the DEQ public website at [www.deq.louisiana.gov](http://www.deq.louisiana.gov).**

Additional copies may be reviewed at St. Charles Parish Library - Headquarters - West Regional Library, 105 Lakewood Drive, Luling, LA 70070.

Inquiries or requests for additional information regarding this permit action should be directed to L. Dugas, LDEQ, Air Permits Division, P.O. Box 4313, Baton Rouge, LA 70821-4313, phone (225) 219-3127.

Persons wishing to be included on the LDEQ permit public notice mailing list or for other public participation related questions should contact the Public Participation Group in writing at LDEQ, P.O. Box 4313, Baton Rouge, LA 70821-4313, by email at [deqmaillistrequest@la.gov](mailto:deqmaillistrequest@la.gov) or contact the LDEQ Customer Service Center at (225) 219-LDEQ (219-5337).

**Permit public notices including electronic access to the proposed permit and statement of basis** can be viewed at the LDEQ permits public notice webpage at [www.deq.louisiana.gov/apps/pubNotice/default.asp](http://www.deq.louisiana.gov/apps/pubNotice/default.asp) and general information related to the public participation in permitting activities can be viewed at [www.deq.louisiana.gov/portal/tabid/2198/Default.aspx](http://www.deq.louisiana.gov/portal/tabid/2198/Default.aspx).

Alternatively, individuals may elect to receive the permit public notices via email by subscribing to the LDEQ permits public notice List Server at [http://www.doa.louisiana.gov/oes/listservpage/ldeq\\_pn\\_listserv.htm](http://www.doa.louisiana.gov/oes/listservpage/ldeq_pn_listserv.htm).

**All correspondence should specify AI Number 2083, Permit Number 476-V2, and Activity Number PER20090006.**

**Scheduled publication dates: Friday, December 11, 2009 in The Advocate and Thursday, December 17 in the St. Charles Herald Guide**

**AIR PERMIT BRIEFING SHEET  
AIR PERMITS DIVISION  
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant  
Agency Interest No.: 2083    Activity No.: PER20090006  
Union Carbide Corporation  
Taft, St. Charles Parish, Louisiana**

**I. Background**

Union Carbide Corporation (UCC), a subsidiary of the Dow Chemical Company, operates the Oxide I Plant at St. Charles Operations, an existing chemical manufacturing facility that began operation prior to 1969. The plant is currently operating under Title V Permit 476-V1 issued January 30, 2007.

This is the renewal with a modification to the current Part 70 operating permit for the Oxide I Plant only.

**II. Origin**

A permit application and Emission Inventory Questionnaire dated September 3, 2009, were received by LDEQ on September 8, 2009 requesting a Part 70 operating permit renewal and modification. Additional information dated November 12, December 1, 2, and 4, 2009, was received as well.

**III. Description**

Ethylene oxide (EO) is produced in the Oxide I Plant at Union Carbide Corporation, St. Charles Operations (SCO) by reacting ethylene and oxygen in the presence of a catalyst. Methane is used as a ballast gas. Since the reaction is exothermic, there is a teralin heat transfer system that is used to recover the heat and generate steam.

Carbon dioxide, a byproduct of the reaction, is removed from the process by absorption in a potassium carbonate solution. The carbon dioxide is stripped from the solution and vented to the atmosphere through a catalytic oxidation unit, which burns the trace hydrocarbons. Impurities that enter the process with the ethylene, oxygen, and methane are purged from the system to either a flare for destruction or the site fuel gas system. The EO is scrubbed from the system using water.

The EO is then stripped from the water and sent on to a series of distillation columns where the EO is concentrated and purified. The purified EO is sent to storage tanks in Site Logistics to either be shipped offsite in railcars as a product or used by other plants within SCO. The remainder of the EO is reacted with water to produce ethylene glycol. The excess water from the glycol system is recovered via a series of evaporators and returned to the process. The monoethylene glycol is separated from the heavier glycols in a distillation column.

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Taft, St. Charles Parish, Louisiana**

With this renewal/modification, UCC is requesting to implement the SCO EO Refining Expansion Project that will install new equipment to increase EO refining capacity at SCO (purify more EO product). This project will also affect sources in the Oxide II Plant (Permit No. 373-V2) and Site Logistics (Permit No. 2656-V0).

Besides purifying more EO at the Oxide I Plant, this modification will permanently shut down the glycol system. The project will modify and expand existing distillation processes for EO refining. This will generate a new water stream that will be further processed in the glycol recovery system that consists of a glycol reactor and stream stripper. The vent stream from the stripper will be routed to a flare in the Oxide II Plant (EPN 60F / EQT0312) or Oxide I Plant (EPN 46M / EQT117). The project will also add a cooling water tower.

The following emission point sources related solely to the glycol system in the Oxide I Plant will be deleted:

- Final Concentrator Vacuum Jet Vent (RL-201) (EPN 36 / EQT112)
- Ethylene Glycol Refining Column Vacuum Jet Vent (RL-205) (EPN 37 / EQT113)
- Evaporator 5 psig Steam Vent 9 PICA-250-90) (EPN 46X / EQT121)
- Condensate Tank Vent to Atmosphere (5 psig) (EPN 2202 / EQT124)

The storage tanks for the purified EO product and railcar loading, vent to the Ethylene Oxide Flare (EPN 507 / EQT146) in Site Logistics, or to the Oxide II Plant for recovery. In addition to tank and loading throughput changes, UCC is proposing to vent the storage tanks and the railcar loading to the Ethylene Oxide Flare at all times.

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Estimated emissions in tons per year are as follows:

| <u>Pollutant</u>  | <u>Before</u> | <u>After</u> | <u>Change</u> |
|-------------------|---------------|--------------|---------------|
| PM <sub>10</sub>  | 0.12          | 1.27         | +1.15         |
| SO <sub>2</sub>   | 0.06          | 0.05         | -0.01         |
| NO <sub>X</sub>   | 4.03          | 5.82         | +1.79         |
| CO                | 22.17         | 31.66        | +9.49         |
| VOC *             | 30.52         | 36.62        | +6.10         |
| Hydrochloric Acid | -             | 0.02         | +0.02         |

**\*VOC LAC 33:III Chapter 51 Toxic Air Pollutants (TAPs):**

| <u>Pollutant</u>   | <u>Before</u> | <u>After</u> | <u>Change</u> |
|--------------------|---------------|--------------|---------------|
| Acetaldehyde       | 0.45          | 0.10         | -0.35         |
| Acrolein           | <0.01         | 0            | -<0.01        |
| 1,4-Dioxane        | 0.02          | <0.01        | -0.02         |
| Chloroethane       | <0.01         | <0.01        | -             |
| 1,2-Dichloroethane | <0.01         | 0.001        | -             |
| Ethylene Glycol    | 7.07          | 0.71         | -6.36         |
| Ethylene Oxide     | 3.62          | 2.56         | -1.06         |
| Formaldehyde       | 0.07          | <0.01        | -0.07         |
| Glycol Ethers      | <0.01         | 0            | -<0.01        |
| Naphthalene        | 0.61          | 0.16         | -0.45         |
| Vinyl Chloride     | <0.01         | <0.01        | -             |
| Total              | 11.84         | 3.53         | -8.31         |

Other VOC (TPY): 33.09

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**SCO EO Refining Expansion Project PSD/NSR Threshold Comparison**

| <u>Pollutant</u> | <u>PSD Significance Threshold</u><br><u>(TPY)</u> | <u>Baseline Actual</u> | <u>Potential to Emit</u> | <u>Project Related Increase in Emissions (TPY)</u> | <u>Netting Analysis Required</u><br><u>(Yes/No)</u> |
|------------------|---|------------------------|--------------------------|--|---|
| VOC              | 40  | 8.95*                  | 37.31*                   | 28.36  | No  |
| PM               | 25  | 0.13*                  | 1.29*                    | 1.10   | No  |
| SO2              | 40  | 0.03*                  | 0.04*                    | 0.01   | No  |
| NOx              | 40  | 3.58*                  | 6.89*                    | 3.31   | No  |
| CO               | 100   | 19.17*                 | 37.15*                   | 17.98  | No  |

\* Project-related only. Does not include changes due to reconciliation.

An actual to potential analysis of the project showed that no pollutant increased in excess of its significance level. Prevention of Significant Deterioration (PSD) review is not required.

**IV. Type of Review**

This permit was reviewed for compliance with 40 CFR 70 and the Louisiana Air Quality Regulations, New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAP). Prevention of Significant Deterioration (PSD) does not apply.

This facility is a major source of toxic air pollutants (TAPs) pursuant to LAC 33:III.Chapter 51.

**V. Credible Evidence**

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

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**VI. Public Notice**

A notice requesting public comment on the permit was published in *The Advocate*, Baton Rouge, on XXX XX, 2009; and in the *St. Charles Herald Guide*, Boutte, on XXX XX, 2009. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on XXX XX, 2009. The draft permit was also submitted to US EPA Region VI on XXX XX, 2009. All comments will be considered prior to the final permit decision.

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**VII. Effects on Ambient Air**

Emissions associated with the proposed renewal/modification were reviewed by the Air Quality Assessment Division to ensure compliance with the NAAQS and AAS. LDEQ did not require the applicant to model emissions.

Dispersion Model Used: None

| Pollutant | Time Period | Calculated Maximum<br>Ground Level<br>Concentration | Louisiana Toxic Air<br>Pollutant Ambient Air<br>Quality Standard or<br>(National Ambient Air<br>Quality Standard<br>(NAAQS)) |
|-----------|-------------|---|--|
|           |             |   |  |

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**VIII. General Condition XVII Activities**

| Work Activity  | Schedule<br>(Events/yr) | Emission Rates - tons |                 |                 |    |       |
|--|-------------------------|-----------------------|-----------------|-----------------|----|-------|
|  |                         | PM <sub>10</sub>      | SO <sub>2</sub> | NO <sub>X</sub> | CO | VOC   |
| Filter Changes   | 240                     | -                     | -               | -               | -  | <0.01 |
| Catalyst Changes   | 5                       | 4.00                  | -               | -               | -  | -     |
| Ethylene Oxide Feed Piping to Glycol in Oxide I                | 50                      | -                     | -               | -               | -  | 0.02  |
| Purified Methane Piping  | 50                      | -                     | -               | -               | -  | <0.01 |
| Ethylene Piping to Ethylene Dichloride (EDC) Piping in Oxide I | 50                      | -                     | -               | -               | -  | <0.01 |
| Ethylene Dichloride (EDC) Piping                               | 50                      | -                     | -               | -               | -  | <0.01 |
| Ethylene Feed Piping   | 50                      | -                     | -               | -               | -  | 0.03  |

**IX. Insignificant Activities**

| ID No.:                      | Description                                | Citation               |
|------------------------------|--|------------------------|
| Laboratory Hoods             | Vent from lab hoods during sample analysis | LAC 33:III.501.B.5.A.6 |
| PG-407J Lube Oil Reservoir   | 300 gals lube oil reservoir                | LAC 33:III.501.B.5.A.3 |
| PG-109R-A Lube Oil Reservoir | 800 gals lube oil reservoir                | LAC 33:III.501.B.5.A.3 |

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

**St Charles Operations -Oxide I Plant**  
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**Table 1. Applicable Louisiana and Federal Air Quality Requirements**

| Table 1. Applicable Louisiana and Federal Air Quality Requirements |  |   |    |   |    |    |    |      |      |       | LAC 33:III:Chapter |      |      |      |   |     |     |     |    |    |    |
|--|--|---|----|---|----|----|----|------|------|-------|--------------------|------|------|------|---|-----|-----|-----|----|----|----|
| ID No.:  | Description  | 2 | 5▲ | 9 | 11 | 13 | 15 | 2103 | 2107 | 2104* | 2121               | 2115 | 2113 | 2111 | 1 | 22  | 29* | 51* | 53 | 56 | 59 |
| AI-2083  | Union Carbide Corp - SCO                               | 1 | 1  | 1 | 1  |    |    |      |      |       |                    |      |      |      |   | 1   | 1   | 1   | 1  | 1  | 1  |
| UNF 014  | UCC-Oxide I Plant                                      | 1 |    |   |    |    |    |      |      |       |                    |      |      |      |   |     |     |     |    |    |    |
| EQT 111  | 27 - Analyzer Fast Purge Header Vent No. 1             |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 1,2 |     |     |    |    |    |
| EQT 114  | 46K - Regenerator Startup/Shutdown Vent                |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 1,2 |     |     |    |    |    |
| EQT 116  | 46L - Catalytic Oxidation Unit (PGC-819)               |   |    |   |    |    |    |      |      |       |                    |      |      |      |   |     |     |     |    |    |    |
| EQT 117  | 46M - Oxide I Flare                                    |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 118  | 46N - Methane Purification System Vent (PIC-A-1106-01) |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 1,2 |     |     |    |    |    |
| EQT 119  | 46P -Compressor Seal Oil Vent                          |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 1,2 |     |     |    |    |    |
| EQT 120  | 46R - Analyzer Cell Vent No. 1                         |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 1,2 |     |     |    |    |    |
| EQT 122  | 2200 - Tetralin Collection Pot Vent                    |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 123  | 2201 - Sodium Bisulfite Tank                           |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 128  | PG-E-806 - Regenerator Condenser                       |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 129  | PG-426 - Oxide I Refining System Vent Scrubber         |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 131  | RL-E-132 - Evaporator Vent Condenser                   |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |
| EQT 134  | PG-477 - EO RC Tails Reactor                           |   |    |   |    |    |    |      |      |       |                    |      |      |      |   | 3   |     |     |    |    |    |

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**X. Table 1. Applicable Louisiana and Federal Air Quality Requirements**

| ID No.:  | Description                                    | LAC 33:III.Chapter |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
|----------|--|--------------------|----|---|----|----|----|------|------|------|------|------|------|----|-----|-----|----|----|
|          |  | 2                  | 5▲ | 9 | 11 | 13 | 15 | 2103 | 2107 | 2111 | 2113 | 2115 | 2121 | 22 | 29* | 51* | 53 | 56 |
| EQT 135  | PG-111 - EDC Feed Tank                         |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 136  | PG-C-801 - Wash Column                         |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    | 1  |
| EQT 237  | PG-462 - Oxide I Reaction System Main Scrubber |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 238  | PG-404 - Oxide I Stripping Still               |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 239  | PG-455 - Aldehyde Stripper                     |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 1070 | 2203-Cooling Tower                             |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     | 3  |    |
| EQT 1072 | PG-301 - Tetralin Surge Tank                   |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     | 1  |    |
| EQT 1073 | MW - Maintenance Wastewater                    |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 1074 | PW - Process Wastewater                        |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 1075 | HX - Heat Exchange Systems                     |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     |    |    |
| EQT 1076 | P-113 - Evaporator Vent Condenser Pot          |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     | 1  |    |
| FUG 03   | 46Q - Fugitive Emissions                       |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     | 1  |    |
| GRP 168  | EO Reactors Common Vent                        |                    |    |   |    |    |    |      |      |      |      |      |      |    |     |     | 2  |    |

\* The regulations indicated above are State Only regulations.

▲ All LAC 33:III Chapter 5 citations are federally enforceable including LAC 33:III.501.C.6 citations, except when the requirement found in the "Specific Requirements" report specifically states that the regulation is State Only.

**KEY TO MATRIX**

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
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Taft St. Charles Parish, Louisiana

- 1 - The regulations have applicable requirements that apply to this particular emission source.
- 2 - The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 3 - The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- Blank - The regulations clearly do not apply to this type of emission source.

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**X. Table 1. Applicable Louisiana and Federal Air Quality Requirements**

| ID No.: | Description   | 40 CFR 60 NSPS |    |   | 40 CFR 61 |   |   | 40 CFR 63 NESHPAP |   |   | 40 CFR |   |   |   |   |   |    |    |    |    |    |    |    |    |
|---------|---|----------------|----|---|-----------|---|---|-------------------|---|---|--------|---|---|---|---|---|----|----|----|----|----|----|----|----|
|         |   | A              | Kb | V | N         | R | N | R                 | A | M | F      | A | F | G | H | Q | EE | GG | EE | GG | 52 | 64 | 68 | 70 |
| AI-2083 | Union Carbide Corp - SCO                              |                |    |   |           |   |   |                   | 1 | 1 | 1      |   |   |   |   |   |    |    |    | 1  | 1  | 1  | 1  | 1  |
| UNF 014 | UCC-Oxide I Plant                                     | 1              |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  |    |    |
| EQT 111 | 27 - Analyzer Fast Purge Header Vent No. 1            |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  |    |    |    |
| EQT 114 | 46K - Regenerator Startup/Shutdown Vent               |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  |    |    |    |
| EQT 116 | 46L - Catalytic Oxidation Unit (PGC-819)              |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  |    |    |
| EQT 117 | 46M - Oxide I Flare                                   | 1              |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  |    |    |
| EQT 118 | 46N - Methane Purification System Vent (PICA-1106-01) |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  |    |    |    |
| EQT 119 | 46P - Compressor Seal Oil Vent                        |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  |    |    |    |
| EQT 120 | 46R - Analyzer Cell Vent No. 1                        |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  |    |    |    |
| EQT 122 | 2200 - Tetralin Collection Pot Vent                   |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  | 3  | 3  |    |    |
| EQT 123 | 2201 - Sodium Bisulfite Tank                          |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 2  | 2  |    |    |    |
| EQT 128 | PG-E-806 - Regenerator Condenser                      |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  | 2  | 2  |
| EQT 129 | PG-426 - Oxide I Refining System Vent Scrubber        | 1              |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  | 2  | 2  |
| EQT 131 | RL-E-132 - Evaporator Vent Condenser                  |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 1  | 1  | 1  | 2  | 2  |
| EQT 134 | PG-477 - EO RC Tails Reactor                          |                |    |   |           |   |   |                   |   |   |        |   |   |   |   |   |    |    |    | 3  |    |    |    |    |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

X. Table 1. Applicable Louisiana and Federal Air Quality Requirements

| ID No.:  | Description                                    | 40 CFR 60 NSPS |    |   |                | 40 CFR 61 |   |   |   | 40 CFR 63 NESHAP |   |   |   | 40 CFR |   |   |    | 40 CFR |    |    |    |    |    |
|----------|--|----------------|----|---|----------------|-----------|---|---|---|------------------|---|---|---|--------|---|---|----|--------|----|----|----|----|----|
|          |  | A              | Kb | V | V <sub>a</sub> | N         | R | A | M | F                | F | A | F | G      | H | Q | EE | GG     | EE | GG | 52 | 64 | 68 |
| EQT 135  | PG-111 - EDC Feed Tank                         |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 136  | PG-C-801 - Wash Column                         |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 237  | PG-462 - Oxide I Reaction System Main Scrubber |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 238  | PG-404 - Oxide I Stripping Still               |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 239  | PG-455 - Aldehyde Stripper                     |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1070 | 2203-Cooling Tower                             |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1072 | PG-301 - Tetralin Surge Tank                   |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1073 | MW - Maintenance Wastewater                    |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1074 | PW - Process Wastewater                        |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1075 | HX - Heat Exchange Systems                     |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| EQT 1076 | P-113 - Evaporator Vent Condenser Pot          |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| FUG 03   | 46Q - Fugitive Emissions                       |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |
| GRP 168  | EO Reactors Common Vent                        |                |    |   |                |           |   |   |   |                  |   |   |   |        |   |   |    |        |    |    |    |    |    |

## KEY TO MATRIX

- 1 - The regulations have applicable requirements that apply to this particular emission source.
- The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

have monitoring, recordkeeping, or reporting requirements.

- 2 -The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.
- 3 -The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank – The regulations clearly do not apply to this type of emission source.

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source

| ID No:  | Requirement  | Notes  |
|---|--|--|
| FUG 03<br>46Q - Fugitives                           | Control of Emission of Organic Compounds: Fugitive Emission Control<br>[LAC 33:III.2121.C.5]   | EXEMPT. Complies with alternate monitoring program per LAC 33:III.2121.C.5. UCC has opted into the Louisiana Fugitive Emissions Program Consolidation.               |
| EQT 111<br>27 - Analyzer Fast Purge Header Vent # 1 | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.107(a)] | DOES NOT APPLY. Does not meet definition of a process vent per 40 CFR 63.101, 107(b) through (h) or meets the criteria listed in 40 CFR 63.107(i).                   |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115]  | EXEMPT. VOC emissions are 100 lbs or less in a 24 hour period as per LAC 33:III.2115.H.1.c. Keep records to show exemption from regulation as per LAC 33:III.2115.K. |

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:  | Requirement  | Notes  |
|---|--|--|
| EQT 114<br>46K- Regenerator<br>Condenser Vent | NESHAP Subparts F and G – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.102] | DOES NOT APPLY as per 40 CFR 63.102(a)(1). Provisions of NESHAP Subparts F and G do not apply during periods of start-up, shutdown, malfunction, or non-operation of the CMPU.           |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115]  | EXEMPT. VOC concentration less than 0.44 psia true partial pressure (30,000 ppm) as per LAC 33:III.2115.H.1.d. Keep records to show exemption from regulation, as per LAC 33:III.2115.K. |
| EQT 117<br>46M - Oxide I Flare                | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115]  | DOES NOT APPLY. Source is required to be controlled by another federal or state regulation that reduces VOC to a more stringent standard than what is required by LAC 33:III.2115.       |
|   | Emissions Standards for Sulfur Dioxide<br>[LAC 33:III.1513]  | DOES NOT APPLY as per LAC 33:III.1502.A.3. Source emits and has the potential to emit is less than 5 TPY.  |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:  | Requirement   | Notes  |
|---|---|--|
| EQT 118<br>46N - Methane<br>Purification System<br>Vent | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.100] | EXEMPT as per 40 CFR 63.100(f)(1).<br>Equipment does not contain organic HAP.  |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115]   | EXEMPT. VOC concentration less than 0.44 psia true partial pressure (30,000 ppm) as per LAC 33:III.2115.H.1.d. Keep records to show exemption from regulation, as per LAC 33:III.2115.K. |
|   | Comprehensive Toxic Air Pollutant Emission Control Program<br>[LAC 33:III.5109] State Only  | DOES NOT APPLY. Source does not emit TAPs listed in LAC 33:III.5112.   |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source

| ID No:                                    | Requirement  | Notes  |
|---|--|--|
| EQT 119<br>46P - Compressor Seal Oil Vent | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry [40 CFR 63.101] | DOES NOT APPLY as per 40 CFR 63.101(b). Equipment is part of a utility system. Utility systems are not part of a CMPU that is subject to the HON.  |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal [LAC 33:III.2115]   | EXEMPT. VOC concentration less than 0.44 psia true partial pressure (30,000 ppm) as per LAC 33:III.2115.H.1.d. Keep records to show exemption from regulation, as per LAC 33:III.2115.K. |
|   | Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5109] State Only  | DOES NOT APPLY. Source does not emit TAPs listed in LAC 33:III.5112.   |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source

| ID No:                                     | Requirement  | Notes  |
|--|--|--|
| EQT 120<br>46R- Analyzer Cell<br>Vent No.1 | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry [40 CFR 63.107] | DOES NOT APPLY. Vent stream is not a process vent since it does not have the characteristics specified in 40 CFR 63.107(b) through (H) or meets the criteria listed in 40 CFR 63.107(i). |
|  | Control of Emission of Organic Compounds: Waste Gas Disposal [LAC 33:III.2115]   | EXEMPT. VOC emissions are 100 lbs or less in a 24 hour period as per LAC 33:III.2115.H.1.c.<br>Keep records to show exemption from regulation as per LAC 33:III.2115.K.                  |

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:  | Requirement   | Notes   |
|---|---|---|
| EQT 122<br>2200 - Tetralin<br>Collection Pot Vent | NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.<br>[40 CFR 60.110b] | DOES NOT APPLY. Storage tank has capacity greater than 39,890 gallons and material stored has max. vapor pressure less than 0.508 psia.           |
|   | Storage of Volatile Organic Compounds<br>[LAC 33:III.2103]  | DOES NOT APPLY. Material stored has max. vapor pressure < 1.5 psia.   |
|   | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.101]   | DOES NOT APPLY as per 40 CFR 63.101(b). Equipment is part of a utility system. Utility systems are not part of a CMPU that is subject to the HON. |
|   | NESHAP Subpart EEEE - National Emission Standard for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)<br>[40 CFR 63.2338(b)]   | DOES NOT APPLY. Equipment does not contain organic liquids as defined in 40 CFR 63.2406.  |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:                                   | Requirement   | Notes  |
|--|---|--|
| EQT 123<br>2201 Sodium Bisulfite<br>Tank | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.100]   | EXEMPT. Tank does not store organic Hazardous Air Pollutants (HAP) as per 40 CFR 63.100(f)(1). |
|  | NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.<br>[40 CFR 60.110b] | DOES NOT APPLY. Tank does not store volatile organic liquids (VOL) as per 40 CFR 60.110b(a).   |
|  | Storage of VOC<br>[LAC 33:III.2103.A]   | DOES NOT APPLY. Tank does not store VOC.   |
|  | Comprehensive Toxic Air Pollutant Emission Control Program.<br>[LAC 33:III.5109.A] State Only   | DOES NOT APPLY. Tank does not emit TAPs listed in LAC 33:III.5112.                             |

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:  | Requirement   | Notes  |
|---|---|--|
| EQT 128<br>PG-E-806-Regenerator<br>Condenser                  | Compliance Assurance Monitoring (CAM)<br>[40 CFR 64.2(b)(1)]                      | EXEMPT. Vent streams(s) are subject to an emission standard that was proposed by EPA after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act (i.e., NSPS or MACT). Therefore the applicability exemption of 40 CFR 64.2(b)(1)(i) is met. |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115] | DOES NOT APPLY. Source is required to be controlled by another federal or state regulation that reduces VOC to a more stringent standard than what is required by LAC 33:III.2115.   |
| EQT 129<br>PG-426-Oxide I<br>Refining System Vent<br>Scrubber | Compliance Assurance Monitoring (CAM)<br>[40 CFR 64.2(b)(1)]                      | EXEMPT. Vent streams(s) are subject to an emission standard that was proposed by EPA after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act (i.e., NSPS or MACT). Therefore the applicability exemption of 40 CFR 64.2(b)(1)(i) is met. |
|   | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115] | DOES NOT APPLY. Source is required to be controlled by another federal or state regulation that reduces VOC to a more stringent standard than what is required by LAC 33:III.2115.   |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:   | Requirement  | Notes   |
|--|--|---|
| EQT 131<br>RL-E-132-Evaporator<br>Vent Condenser     | Compliance Assurance Monitoring (CAM)<br>[40 CFR 64.2(b)(1)]   | Vent streams(s) are subject to an emission standard that was proposed by EPA after November 15, 1990 pursuant to section 111 or 112 of the Clean Air Act (i.e., NSPS or MACT). Therefore the applicability exemption of 40 CFR 64.2(b)(1) is met. |
|  | Control of Emission of Organic Compounds: Waste Gas Disposal<br>[LAC 33:III.2115]  | DOES NOT APPLY. Source is required to be controlled by another federal or state regulation that reduces VOC to a more stringent standard than what is required by LAC 33:III.2115.  |
| GRP 168<br>Oxide I-EO Reactors<br>(EQTs 132 and 133) | NSPS Subpart RRR – Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Manufacturing Industry (SOCMI) Reactor Processes.<br>[40 CFR 60.700(b)] | DOES NOT APPLY. Affected facility was not constructed, modified, or reconstructed after June 29, 1990   |
| EQT 134<br>PG-477 EO RC Tails<br>Reactor             | NSPS Subpart RRR – Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Manufacturing Industry (SOCMI) Reactor Processes.<br>[40 CFR 60.700(b)] | DOES NOT APPLY. Reactor process(es) do not have a vent stream as defined in 40 CFR 60.701. Therefore, it is not an affected facility.   |

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:                             | Requirement   | Notes  |
|------------------------------------|---|--|
| EQT 135<br>PG-111-EDC Feed<br>Tank | NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.<br>[40 CFR 60.110B] | DOES NOT APPLY. Tank capacity is less than 75 cubic meters (19,813 gals) as per 40 CFR 60.110(b)(a). |
|                                    | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.101]   | DOES NOT APPLY. Tank capacity is less than 38 cubic meters (10,038 gals) as per 40 CFR 63.101(b).    |
| EQT 136<br>PG-C-801 Wash<br>Column | NSPS Subpart NNN – Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations.<br>[40 CFR 60.660, 662(b)]                                  | DOES NOT APPLY. This unit has not undergone modification or reconstruction after December 30, 1983.  |

## LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

**St Charles Operations -Oxide I Plant**  
**Agency Interest No.: 2083 Activity No.: PER20090006**  
**Union Carbide Corporation**  
**Taft St. Charles Parish, Louisiana**

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:                                    | Requirement   | Notes   |
|---|---|---|
| EQT 1070<br>2203-Cooling Tower            | NESHAP Subpart Q - National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers<br>[40 CFR 63.400(a)]   | DOES NOT APPLY. Cooling tower does not use chromium-based water treatment chemicals.  |
|   | Comprehensive Toxic Air Pollutant Emission Control Program<br>[LAC 33:III.5109] State Only  | DOES NOT APPLY. Source does not emit TAPs listed in LAC 33:III.5112.  |
| EQT 1072<br>PG-301-Tetralin<br>Surge Tank | NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.<br>[40 CFR 60.110b] | DOES NOT APPLY. Tank capacity is less than 75 cubic meters (19,813 gals) as per 40 CFR 60.110b(a).  |
|   | NESHAP Subpart F – National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry<br>[40 CFR 63.100]   | DOES NOT APPLY as per 40 CFR 63.101(b). Equipment is part of a utility system. Utility systems are not part of a CMPU that is subject to the HON. |
|   | NESHAP Subpart EEEE - National Mission Standard For Hazardous Air Pollutants: Organic Liquids Distribution (Non Gasoline)<br>40 CFR 63.2338(b)  | DOES NOT APPLY. Equipment does not contain organic liquids as defined in 40 CFR 63.2406.  |

**LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

St Charles Operations -Oxide I Plant  
 Agency Interest No.: 2083 Activity No.: PER20090006  
 Union Carbide Corporation  
 Taft St. Charles Parish, Louisiana

**XI. Table 2. Explanation for Exemption Status or Non-Applicability of a Source**

| ID No:   | Requirement   | Notes  |
|--|---|--|
| EQT 1076<br>P-113-Evaporator Vent<br>Condenser Pot | NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.<br>[40 CFR 60.110b] | DOES NOT APPLY. Tank capacity is less than 75 cubic meters (19,813 gals) as per 40 CFR 60.110b(a). |
|  | Storage of Volatile Organic Compounds<br>[LAC 33:III.2103]  | DOES NOT APPLY. Vapor pressure of VOC stored is less than 1.5 psia.                                |

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.

**INVENTORIES**

All ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**Subject Item Inventory:**

| ID                        | Description                                      | Tank Volume       | Max. Operating Rate             | Normal Operating Rate | Contents                      | Operating Time                 |
|---------------------------|--|-------------------|---------------------------------|-----------------------|-------------------------------|--------------------------------|
| <b>Oxide I Plant</b>      |  |                   |                                 |                       |                               |                                |
| EQT 0111                  | 27 - Analyzer Fast Purge Header Vent #1          |                   |                                 |                       |                               | 24 hr/yr                       |
| EQT 0114                  | 46K - Regenerator Startup/Shutdown Vent          |                   |                                 |                       |                               | 120 hr/yr                      |
| EQT 0116                  | 46L - Catalytic Oxidation Unit (COU)             |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0117                  | 46M - Oxide I Flare                              |                   | 3146 MM BTU/hr                  | 171124 MM BTU/yr      | fuel: Ethylene Oxide/Fuel Gas | 8760 hr/yr                     |
| EQT 0118                  | 46N - Methane Purification System Vent           |                   |                                 |                       |                               | 40 hr/yr                       |
| EQT 0119                  | 46P - Compressor Seal Oil Vent                   |                   |                                 | 59 lb/hr              |                               | 8760 hr/yr                     |
| EQT 0120                  | 46R - Analyzer Cell Vent No. 1                   |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0122                  | 2200 - Tetralin Collection Pot Vent              | 45876 gallons     |                                 | 21,024 MM gallons/yr  | Tetralin                      | 8760 hr/yr                     |
| EQT 0123                  | 2201 - Sodium Bisulfite Tank                     | 20306 gallons     |                                 |                       | Sodium Bisulfite              | 8760 hr/yr                     |
| EQT 0125                  | PG-463 - Purifying Column                        |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0126                  | PG-423 - Exhaust Column                          |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0127                  | PG-473 - EO Recovery Column                      |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0128                  | PG-E-806 - Regenerator Condenser                 |                   | 133 lb/hr                       |                       |                               | 8760 hr/yr                     |
| EQT 0129                  | PG-426 - Oxide I Refining System Vent Scrubber   |                   |                                 | 9889 lb/hr            |                               | 8760 hr/yr                     |
| EQT 0130                  | RXSD - Reaction System Trips/Shutdown            |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0131                  | RLE-132 - Evaporator Vent Condenser              |                   |                                 | 4612 lb/hr            |                               | 8760 hr/yr                     |
| EQT 0132                  | PG-101-106 - EO Reactors                         |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0133                  | PG-201-203 - EO Reactors                         |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0134                  | PG-477 - EO RC Tails Reactor                     |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0135                  | PG-111 - EDC Feed Tank                           |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0136                  | PG-901 - Wash Column                             |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0237                  | PG-482 - Oxide I Reaction System Main Scrubber   |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0238                  | PG-404 - Oxide I Stripping Still                 |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0239                  | PG-455 - Aldehyde Stripper                       |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 0312                  | 60F - Oxide 2 Unit Flare                         |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 1070                  | 2203 - Cooling Tower                             |                   | 840000 gallons/hr               | 840000 gallons/hr     |                               | 8760 hr/yr                     |
| EQT 1072                  | PG-301 - Tetralin Surge Tank                     | 19749 gallons     |                                 |                       |                               | 8760 hr/yr                     |
| EQT 1073                  | MW - Maintenance Wastewater                      |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 1074                  | PW - Process Wastewater                          |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 1075                  | HX - Heat Exchange Systems                       |                   |                                 |                       |                               | 8760 hr/yr                     |
| EQT 1076                  | P-113 - Evaporator Vent Condensate Poi           |                   |                                 |                       |                               | 8760 hr/yr                     |
| FUG 0003                  | 46Q - Fugitive Emissions                         |                   |                                 |                       |                               | 8760 hr/yr                     |
| <b>Stack Information:</b> |  |                   |                                 |                       |                               |                                |
| ID                        | Description                                      | Velocity (ft/sec) | Flow Rate (cubic ft/min-actual) | Diameter (feet)       | Discharge Area (square feet)  | Height (feet) Temperature (oF) |
| Oxide I Plant             | EQT 0111 27 - Analyzer Fast Purge Header Vent #1 | 30.9              | 91                              | .25                   | 26                            | 100                            |

**INVENTORIES**

**AI ID: 2083 - Union Carbide Corp - St Charles Operations**  
**Activity Number: PER20090006**  
**Permit Number: 476-V2**  
**Air - Title V Regular Permit Renewal**

**Stack Information:**

| ID                   | Description                             | Velocity<br>(ft/sec) | Flow Rate<br>(cubic ft/min-actual) | Diameter<br>(feet) | Discharge Area<br>(square feet) | Height<br>(feet) | Temperature<br>(OF) |
|----------------------|---|----------------------|------------------------------------|--------------------|---------------------------------|------------------|---------------------|
| <b>Oxide I Plant</b> |   |                      |                                    |                    |                                 |                  |                     |
| EQT 0114             | 46K - Regenerator Startup/Shutdown Vent | 99                   | 16070                              | 1.8                |                                 | 240              | 104                 |
| EQT 0116             | 46L - Catalytic Oxidation Unit (COU)    | 57                   | 11487                              | 2                  |                                 | 240              | 342                 |
| EQT 0117             | 46M - Oxide I Flare                     | 1.6                  | 4633                               | 3                  |                                 | 240              | 1832                |
| EQT 0118             | 46N - Methane Purification System Vent  | 180                  | 561                                | 25                 |                                 | 50               | 90                  |
| EQT 0119             | 46P - Compressor Seal Oil Vent          | 17.9                 | 23.9                               | 17                 |                                 | 35               | 113                 |
| EQT 0120             | 46R - Analyzer Cell Vent No. 1          | 3.3                  | 1                                  | .08                |                                 | 21               | 70                  |
| EQT 0122             | 2200 - Tetralin Collection Pot Vent     |                      |                                    | 1.5                |                                 | 50               |                     |
| EQT 1070             | 2203 - Cooling Tower                    | 30.8                 | 980000                             |                    | 530                             | 20               | 80                  |

**Relationships:**

| ID      | Description                                    | Relationship                            | ID       | Description                                    |
|---------|--|---|----------|--|
| DT 0116 | 46L - Catalytic Oxidation Unit (COU)           | Controls emissions from                 | EQT 0128 | PG-E-806 - Regenerator Condenser               |
| DT 0119 | 46P - Compressor Seal Oil Vent                 | Controlled by                           | EQT 0312 | 60F - Oxide 2 Unit Flare                       |
| DT 0125 | PG-463 - Purifying Column                      | Vents to                                | EQT 0129 | PG-426 - Oxide I Refining System Vent Scrubber |
| DT 0126 | PG-423 - Exhaust Column                        | Vents to                                | EQT 0129 | PG-426 - Oxide I Refining System Vent Scrubber |
| DT 0127 | PG-473 - EO Recovery Column                    | Vents to                                | EQT 0129 | PG-426 - Oxide I Refining System Vent Scrubber |
| DT 0129 | PG-426 - Oxide I Refining System Vent Scrubber | Controlled by                           | EQT 0117 | 46M - Oxide I Flare                            |
| DT 0129 | PG-426 - Oxide I Refining System Vent Scrubber | Vents to, (vapors go to)                | GRP 0054 | Oxide I - CO2 Removal System                   |
| DT 0130 | RXSD - Reaction System Trips/Shutdown          | Vents to                                | EQT 0131 | RL-E-132 - Evaporator Vent Condenser           |
| DT 0131 | RL-E-132 - Evaporator Vent Condenser           | Controlled by                           | EQT 0117 | 46M - Oxide I Flare                            |
| DT 0131 | RL-E-132 - Evaporator Vent Condenser           | Controlled by , or                      | EQT 0312 | 60F - Oxide 2 Unit Flare                       |
| DT 0136 | PG-801 - Wash Column                           | Vents to, (process vapors)              | GRP 0052 | Oxide I - Reaction System                      |
| DT 0237 | PG-462 - Oxide I Reaction System Main Scrubber | Vents to, (methane gas)                 | EQT 0130 | RXSD - Reaction System Trips/Shutdown          |
| DT 0237 | PG-462 - Oxide I Reaction System Main Scrubber | Vents to, (oxide & water liquid stream) | EQT 0238 | PG-404 - Oxide I Stripping Still               |
| DT 0237 | PG-462 - Oxide I Reaction System Main Scrubber | Vents to, (process vapor stream)        | GRP 0054 | Oxide I - CO2 Removal System                   |
| DT 0238 | PG-404 - Oxide I Stripping Still               | Vents to, (oxide vapors)                | GRP 0053 | Oxide I - Refining System                      |
| DT 0239 | PG-455 - Aldehyde Stripper                     | Vents to, (vapor stream)                | EQT 0131 | RL-E-132 - Evaporator Vent Condenser           |
| DT 0239 | PG-455 - Aldehyde Stripper                     | Vents to, (liquid stream)               | GRP 0055 | Oxide I - Glycol Recovery System               |
| DT 1072 | PG-301 - Tetralin Surge Tank                   | Vents to                                | EQT 0122 | 2200 - Tetralin Collection Pot Vent            |
| DT 1076 | P-113 - Evaporator Vent Condensate Pot         | Controlled by                           | EQT 0117 | 46M - Oxide I Flare                            |
| DT 1076 | P-113 - Evaporator Vent Condensate Pot         | Controlled by , or                      | EQT 0312 | 60F - Oxide 2 Unit Flare                       |

**INVENTORIES**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**Subject Item Groups:**

| ID       | Group Type            | Group Description                 |
|----------|-----------------------|-----------------------------------|
| GRP 0052 | Equipment Group       | Oxide I - Reaction System         |
| GRP 0053 | Equipment Group       | Oxide I - Refining System         |
| GRP 0054 | Equipment Group       | Oxide I - CO2 Removal System      |
| GRP 0055 | Equipment Group       | Oxide I - Glycol Recovery System  |
| GRP 0168 | Equipment Group       | Oxide I - EO Reactors Common Vent |
| UNF 0014 | Unit or Facility Wide | UCC - Oxide I Plant               |

**Group Membership:**

| ID       | Description                                    | Member of Groups               |
|----------|--|--------------------------------|
| EQT 0111 | 27 - Analyzer Fast Purge Header Vent #1        | GRP00000000052                 |
| EQT 0114 | 46K - Regenerator Startup/Shutdown Vent        | GRP00000000054                 |
| EQT 0116 | 46L - Catalytic Oxidation Unit (COU)           | GRP00000000054                 |
| EQT 0117 | 46M - Oxide I Flare                            | GRP00000000055                 |
| EQT 0118 | 46N - Methane Purification System Vent         | GRP00000000052                 |
| EQT 0119 | 46P - Compressor Seal Oil Vent                 | GRP00000000053                 |
| EQT 0120 | 46R - Analyzer Cell Vent No. 1                 | GRP00000000052                 |
| EQT 0122 | 2200 - Tetralin Collection Pot Vent            | GRP00000000052                 |
| EQT 0123 | 2201 - Sodium Bisulfite Tank                   | GRP00000000052                 |
| EQT 0125 | PG-463 - Purifying Column                      | GRP00000000053                 |
| EQT 0126 | PG-423 - Exhaust Column                        | GRP00000000053                 |
| EQT 0127 | PG-473 - EO Recovery Column                    | GRP00000000053                 |
| EQT 0128 | PG-E-806 - Regenerator Condenser               | GRP00000000054                 |
| EQT 0129 | PG-426 - Oxide I Refining System Vent Scrubber | GRP00000000053                 |
| EQT 0131 | RL-E-132 - Evaporator Vent Condenser           | GRP00000000053, GRP00000000055 |
| EQT 0132 | PG-101-106 - EO Reactors                       | GRP00000000052, GRP0000000168  |
| EQT 0133 | PG-201-203 - EO Reactors                       | GRP00000000052, GRP0000000168  |
| EQT 0134 | PG-477 - EO RC Tails Reactor                   | GRP00000000053                 |
| EQT 0135 | PG-111 - EDC Feed Tank                         | GRP00000000052                 |
| EQT 0136 | PG-801 - Wash Column                           | GRP00000000054                 |
| EQT 0237 | PG-462 - Oxide I Reaction System Main Scrubber | GRP00000000052                 |
| EQT 0238 | PG-404 - Oxide I Stripping Still               | GRP00000000052                 |
| EQT 0239 | PG-455 - Aldehyde Stripper                     | GRP00000000053                 |

**NOTE:** The UNF group relationship is not printed in this table. Every subject item is a member of the UNF group

**Annual Maintenance Fee:**

| Fee Number | Air Contaminant Source                                  | Multplier | Units Of Measure |
|------------|---|-----------|------------------|
| 0630       | 0630 Organic Oxides, Alcohols, Glycols (Rated Capacity) | 1380      | MM lbs/yr        |

**INVENTORIES**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
Activity Number: PER20090006  
Permit Number: 476-V2  
Air - Title V Regular Permit Renewal

| SIC Codes: |                                   |
|------------|-----------------------------------|
| 2889       | Industrial organic chemicals, nec |

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****AI 2083 - Union Carbide Corp - SCO**

- 1 [40 CFR 60.]
- 2 [40 CFR 61.145(b)(1)]
- 3 [40 CFR 61.148]
- 4 [40 CFR 61.342(b)]
- 5 [40 CFR 61.342(c)(1)(v)]
- 6 [40 CFR 61.355]
- 7 [40 CFR 61.356]
- 8 [40 CFR 61.357(d)(2)]
- 9 [40 CFR 61.357(d)(6)]
- 10 [40 CFR 61.357(d)(7)]
- 11 [40 CFR 61.357(d)(8)]
- 12 [40 CFR 61.]
- 13 [40 CFR 63.7881(a)]
- 14 [40 CFR 63.]
- 15 [40 CFR 68.15(a)]
- 16 [40 CFR 68.15(b)]

All affected facilities shall comply with all applicable provisions in 40 CFR 60 Subpart A.

Provide DEQ with written notice of intention to demolish or renovate prior to performing activities to which 40 CFR 61 Subpart M applies. Delivery of the notice by U.S. Postal Service, commercial delivery service, or hand delivery is acceptable. Subpart M. [40 CFR 61.145(b)(1)] Do not install or reinstall on a facility component any insulating materials that contain commercial asbestos if the materials are either molded and friable or wet-applied and friable after drying. Subpart M.

Comply with the requirements of 40 CFR 61.342(c) through (h) no later than 90 days following the effective date, unless a waiver of compliance has been obtained under 40 CFR 61.11, or by the initial startup for a new source with an initial startup after the effective date. Subpart FF. [40 CFR 61.342(b)]

Waste streams containing benzene: Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in 40 CFR 61.348. Subpart FF. [40 CFR 61.342(c)(1)(i)]

Determine compliance with 40 CFR 61 Subpart FF using the test methods and procedures specified in 40 CFR 61.355(a) through (i), as applicable. Subpart FF.

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 61.356(a) through (n), as applicable. Maintain each record in a readily accessible location at the facility site for a period not less than two years from the date the information is recorded unless otherwise specified. Subpart FF.

Submit report: Due annually, beginning on the date that equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit updates to the information listed in 40 CFR 61.357(a)(1) through (a)(3) or, if the information in 40 CFR 61.357(a)(1) through (3) is not changed in the following year, a statement to that effect. Subpart FF. [40 CFR 61.357(d)(2)]

Submit report: Due quarterly, beginning three months after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit a certification that all of the required inspections have been carried out in accordance with the requirements of 40 CFR 61 Subpart FF. Subpart FF. [40 CFR 61.357(d)(6)]

Submit report: Due quarterly, beginning three months after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Include the information specified in 40 CFR 61.357(d)(7)(i) through (d)(7)(v). Subpart FF. [40 CFR 61.357(d)(7)]

Submit report: Due annually, beginning one year after the date that the equipment necessary to comply with 40 CFR 61 Subpart FF has been certified in accordance with 40 CFR 61.357(d)(1). Submit a report that summarizes all inspections required by 40 CFR 61.342 through 61.354 during which detectable emissions are measured or a problem that could result in benzene emissions is identified, including information about the repairs or corrective action taken. Subpart FF. [40 CFR 61.357(d)(8)]

All affected facilities shall comply with all applicable provisions in 40 CFR 61 Subpart A.

When permittee conducts a site remediation, as defined in 40 CFR 63.7957, permittee shall comply with all applicable requirements of this subpart unless the site remediation is exempted under 40 CFR 7881(b) or (c). Subpart GGGGG. [40 CFR 63.7881(a)]

All affected facilities shall comply with all applicable provisions in 40 CFR 63 Subpart A.

Develop a management system to oversee the implementation of the risk management program elements. [40 CFR 68.15(a)]

Assign a qualified person or position that has the overall responsibility for the development, implementation, and integration of the risk management program elements. [40 CFR 68.15(b)]

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-Y2****Air - Title V Regular Permit Renewal****AI 2083 AI-2083 - Union Carbide Corp - SCO**

Define the lines of authority through an organization chart or similar document when responsibility for implementing individual requirements of

40 CFR 68 is assigned to persons other than the person identified under 68.15(b). [40 CFR 68.15(c)]

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document the names or positions of the people, other than the person identified under 68.15(b), who are assigned responsibility for implementing individual requirements of 40 CFR 68. [40 CFR 68.15(c)]

Submit Risk Management Plan (RMP): Due no later than June 21, 1999, or three years after the date on which a regulated substance is first listed under 68.130, or the date on which a regulated substance is first present above a threshold quantity in a process. Submit in a method and format to a central point as specified by EPA prior to June 21, 1999.

Provide in the RMP an executive summary that includes a brief description of the elements listed in 68.155(a) through (g).

Complete a single registration form and include in the RMP. Cover all regulated substances handled in covered processes. Include in the registration the information specified in 68.160(b)(1) through (13).

Submit in the RMP information the release scenarios specified in 68.165(a)(2). Include the data listed in 68.165(b)(1) through (13).

Submit in the RMP the information provided in 68.42(b) on each accident covered by 68.42(a).

Provide in the RMP the information indicated in 68.175(b) through (p).

Provide in the RMP the emergency response information listed in 68.180(a) through (c).

Submit in the RMP a single certification that, to the best of the signer's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete. [40 CFR 68.185(b)]

Submit revised registration to EPA: Due within six months after a stationary source is no longer subject to 40 CFR 68. Indicate that the stationary source is no longer covered. [40 CFR 68.190(c)]

Review and update the RMP as specified in 68.190(b) and submit it in a method and format to a central point specified by EPA prior to June 21, 1999.

Maintain records supporting the implementation of 40 CFR 68 for five years unless otherwise provided.

Use the endpoints specified in 68.22(a) through (g) for analyses of offsite consequences.

Analyze the release scenarios in 68.25, as specified in 68.25(a) through (h).

Identify and analyze at least one alternative release scenario for each regulated toxic substance held in a covered process(es) and at least one alternative release scenario to represent all flammable substances held in covered processes, as specified in 68.28(b) through (e). Estimate in the RMP the population within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in 68.22(a).

List in the RMP environmental receptors within a circle with its center at the point of the release and a radius determined by the distance to the endpoint defined in 68.22(a).

Submit revised RMP: Due within six months after changes in processes, quantities stored or handled, or any other aspect of the stationary source increase or decrease the distance to the endpoint by a factor of two or more. [40 CFR 68.36(b)] Review and update the offsite consequence analyses at least once every five years. Complete a revised analysis within six months if changes in processes, quantities stored or handled, or any other aspect of the stationary source might reasonably be expected to increase or decrease the distance to the endpoint by a factor of two or more.

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****AI 2083 AI-2083 - Union Carbide Corp - SCO**

- 37 [40 CFR 68.39] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain the records specified in 68.39(a) through (e) on the offsite consequence analyses.
- 38 [40 CFR 68.42] Include in the five-year accident history all accidental releases from covered processes that resulted in deaths, injuries, or significant property damage on site, or known offsite deaths, injuries, evacuations, sheltering in place, property damage, or environmental damage. Include the information specified in 68.42(b)(1) through (10) for each accidental release.
- 39 [40 CFR 68.65(a)] Compile written process safety information, which includes information pertaining to the hazards of the regulated substances used or produced by the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process, before conducting any process hazard analysis required by 40 CFR 68. [40 CFR 68.65(a)]
- 40 [40 CFR 68.65(d)(2)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document that equipment complies with recognized and generally accepted good engineering practices. [40 CFR 68.65(d)(2)]
- 41 [40 CFR 68.65(d)(3)] Determine that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner. [40 CFR 68.65(d)(3)]
- 42 [40 CFR 68.65(d)(3)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document that existing equipment, designed and constructed in accordance with codes, standards, or practices that are no longer in general use, is designed, maintained, inspected, tested, and operating in a safe manner. [40 CFR 68.65(d)(3)]
- 43 [40 CFR 68.67(a)] Determine the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. [40 CFR 68.67(a)]
- 44 [40 CFR 68.67(a)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document the priority order for conducting process hazard analyses based on a rationale which includes such considerations as extent of the process hazards, number of potentially affected employees, age of the process, and operating history of the process. [40 CFR 68.67(a)]
- 45 [40 CFR 68.67(b)] Use one or more of the methodologies in Sec. 68.67(b)(1) through (b)(7) to determine and evaluate the hazards of the process being analyzed. [40 CFR 68.67(b)]
- 46 [40 CFR 68.67(d)] Use a team with expertise in engineering and process operations to perform the process hazard analysis. Include at least one employee who has experience and knowledge specific to the process being evaluated, and at least one employee who is knowledgeable in the specific process hazard analysis methodology being used. [40 CFR 68.67(d)]
- 47 [40 CFR 68.67(e)] Establish a system to promptly address the team's findings and recommendations; assure that the recommendations are resolved in a timely manner and that the resolution is documented; document what actions are to be taken; complete actions as soon as possible; develop a written schedule of when these actions are to be completed; communicate the actions to operating, maintenance and other employees whose work assignments are in the process and who may be affected by the recommendations or actions. [40 CFR 68.67(e)]
- 48 [40 CFR 68.67(e)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document the resolution of the recommendations of the team performing the process hazard analysis, and what actions are to be taken. [40 CFR 68.67(e)]
- 49 [40 CFR 68.67(f)] Update and revalidate the process hazard analysis at least every five years after the completion of the initial process hazard analysis, to assure that the process hazard analysis is consistent with the current process. Use a team that meets the requirements in Sec. 68.67(d). [40 CFR 68.67(f)]
- 50 [40 CFR 68.67(g)] Retain process hazards analyses and updates or revalidations for each process covered by this section, as well as the documented resolution of recommendations described in Sec. 68.67(e), for the life of the process. [40 CFR 68.67(g)]

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**AI 2083 AI-2083 - Union Carbide Corp - SCO**

- Develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information. Address steps for each operating phase, operating limits, safety and health considerations, and safety systems and their functions in the procedures. [40 CFR 68.69(a)]
- Make operating procedures readily accessible to employees who work in or maintain a process. [40 CFR 68.69(b)]
- Review operating procedures as often as necessary to assure that they reflect current operating practice, including changes that result from changes in process chemicals, technology, and equipment, and equipment, and changes to stationary sources. Certify annually that these operating procedures are current and accurate. [40 CFR 68.69(c)]
- Develop and implement safe work practices to provide for the control of hazards during specific operations. [40 CFR 68.69(d)]
- Train each employee presently involved in operating a process, and each employee before being involved in operating a newly assigned process, in an overview of the process and in the operating procedures as specified in Sec. 68.69. Emphasize the specific safety and health hazards, emergency operations including shutdown, and safe work practices applicable to the employee's job tasks. [40 CFR 68.71(a)(1)]
- Provide refresher training at least every three years, and more often if necessary, to each employee involved in operating a process to assure that the employee understands and adheres to the current operating procedures of the process. [40 CFR 68.71(b)]
- Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Prepare a record which contains the identity of the employee, the date of training required by 40 CFR 68.71, and the means used to verify that the employee understood the training. [40 CFR 68.71(c)]
- Ascertain that each employee involved in operating a process has received and understood the training required by Sec. 68.71. [40 CFR 68.71(c)]
- Establish and implement written procedures to maintain the ongoing integrity of process equipment listed in Sec. 68.73(a). [40 CFR 68.73(b)]
- Train each employee involved in maintaining the ongoing integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner. [40 CFR 68.73(c)]
- Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document each inspection and test that has been performed on process equipment. Maintain records of the information specified in Sec. 68.73(d)(4). [40 CFR 68.73(d)(4)]
- Perform inspections and tests following recognized and generally accepted good engineering practices on process equipment listed in 40 CFR 68.73(a). Make the frequency of inspections and tests consistent with applicable manufacturer's recommendations and good engineering practices, and more frequently if determined to be necessary by prior operating experience. [40 CFR 68.73(d)]
- Correct deficiencies in equipment that are outside acceptable limits before further use or in a safe and timely manner when necessary means are taken to assure safe operation. [40 CFR 68.73(e)]
- Assure that equipment as it is fabricated is suitable for the process application for which it will be used, in the construction of new plants and equipment. Perform appropriate checks and inspections to assure that equipment is installed properly and consistent with design specifications and the manufacturer's instructions. Assure that maintenance materials, spare parts and equipment are suitable for the process application for which they will be used. [40 CFR 68.73(f)]
- Inform employees involved in operating a process, and maintenance and contract employees whose job tasks will be affected, of a change in the process and train them in the change, prior to start-up of the process or affected part of the process. [40 CFR 68.75(c)]
- Update the process safety information required by Sec. 68.65 if a change covered by 68.75 results in a change in the process safety information. [40 CFR 68.75(d)]

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**AI 2083 - Union Carbide Corp - SCO**

- 67 [40 CFR 68.75(e)] Update the operating procedures or practices required by Sec. 68.69 if a change covered by 68.75 results in a change in the operating procedures or practices. [40 CFR 68.75(e)]
- 68 [40 CFR 68.75] Establish and implement written procedures to manage changes to process chemicals, technology, equipment, and procedures; and, changes to stationary sources that affect a covered process. Assure that the considerations specified in Sec. 68.75(b)(1) through (b)(5) are addressed prior to any change.
- 69 [40 CFR 68.77] Perform a pre-startup safety review for new stationary sources and for modified stationary sources when the modification is significant enough to require a change in the process safety information. Safety review must confirm the information specified in Sec. 68.77(b)(1) through (b)(4) prior to the introduction of regulated substances to a process.
- 70 [40 CFR 68.79(c)] Develop a report of the findings of the compliance audit required by 40 CFR 68.79(a). [40 CFR 68.79(c)]
- 71 [40 CFR 68.79(d)] Determine an appropriate response to each of the findings of the compliance audit. [40 CFR 68.79(d)]
- 72 [40 CFR 68.79(d)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document the appropriate response to each of the findings of the compliance audit, and document that deficiencies have been corrected. [40 CFR 68.79(d)]
- 73 [40 CFR 68.79(e)] Retain the two (2) most recent compliance audit repts. [40 CFR 68.79(e)]
- 74 [40 CFR 68.79] Conduct compliance audit: Due at least every three years. Certify compliance with the provisions of the prevention program to verify that procedures and practices developed under 40 CFR 68 are adequate and are being followed. Conduct compliance audit by at least one person knowledgeable in the process.
- 75 [40 CFR 68.81(c)] Establish an incident investigation team consisting of at least one person knowledgeable in the process involved, including a contract employee if the incident involved work of the contractor, and other persons with appropriate knowledge and experience to thoroughly investigate and analyze the incident. [40 CFR 68.81(c)]
- 76 [40 CFR 68.81(e)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Document resolutions and corrective actions of the incident report findings and recommendations. [40 CFR 68.81(e)]
- 77 [40 CFR 68.81(e)] Establish a system to promptly address and resolve the incident report findings and recommendations. [40 CFR 68.81(e)]
- 78 [40 CFR 68.81] Conduct incident investigation: Due as promptly as possible, but not later than 48 hours following each incident which resulted in, or could reasonably have resulted in a catastrophic release of a regulated substance.
- 79 [40 CFR 68.81] Prepare a report at the conclusion of the incident investigation which includes, at a minimum, the information specified in 40 CFR 68.81(d)(1) through (5). Review the report with all affected personnel whose job tasks are relevant to the incident findings including contract employees where applicable. Retain the incident investigation reports for five years.
- 80 [40 CFR 68.83(ai)] Develop a written plan of action regarding the implementation of the employee participation required by 40 CFR 68. [40 CFR 68.83(ai)]
- 81 [40 CFR 68.83(b)] Consult with employees and their representatives on the conduct and development of process hazards analyses and on the development of the other elements of process safety management. [40 CFR 68.83(b)]
- 82 [40 CFR 68.83(c)] Provide to employees and their representatives access to process hazard analyses and to all other information required to be developed under 40 CFR 68. [40 CFR 68.83(c)]
- 83 [40 CFR 68.85] Issue a hot work permit for hot work operations conducted on or near a covered process. Document in the permit that the fire prevention and protection requirements in 29 CFR 1910.252(a) have been implemented prior to beginning the hot work operations; indicate the date(s) authorized for hot work; and identify the object on which hot work is to be performed. Keep permit on file until completion of the hot work operations.

**SPECIFIC REQUIREMENTS**

**AI ID: 2083 - Union Carbide Corp - St Charles Operations**  
**Activity Number: PER20090006**  
**Permit Number: 476-V2**  
**Air - Title V Regular Permit Renewal**

**AI 2083 - Union Carbide Corp - SCO**

- 84 [40 CFR 68.87(b)(1)] Obtain and evaluate information regarding the contract owner or operator's safety performance and programs, when selecting a contractor. [40 CFR 68.87(b)(1)]
- 85 [40 CFR 68.87(b)(2)] Inform contract owner or operator of the known potential fire, explosion, or toxic release hazards related to the contractor's work and the process. [40 CFR 68.87(b)(2)]
- 86 [40 CFR 68.87(b)(3)] Explain to the contract owner or operator the applicable provisions of 40 CFR 68 Subpart E. [40 CFR 68.87(b)(3)]
- 87 [40 CFR 68.87(b)(4)] Develop and implement safe work practices consistent with Sec. 68.69(d), to control the entrance, presence, and exit of the contract owner or operator and contract employees in covered process areas. [40 CFR 68.87(b)(4)]
- 88 [40 CFR 68.87(b)(5)] Periodically evaluate the performance of the contract owner or operator in fulfilling their obligations as specified in 40 CFR 68.87(c). [40 CFR 68.87(b)(5)]
- 89 [40 CFR 68.95(a)] Develop and implement an emergency response program for the purpose of protecting public health and the environment. Include in the program the elements listed in 40 CFR 68.95(a)(1) through (4). [40 CFR 68.95(a)]
- 90 [40 CFR 68.95(c)] Coordinate the emergency response plan developed under 68.95(a)(1) with the community emergency response plan developed under 42 U.S.C. 11003. Upon request of the local emergency planning committee or emergency response officials, promptly provide information necessary for developing and implementing the community emergency response plan. [40 CFR 68.95(c)]
- 91 [40 CFR 82. Subpart F] Comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B.
- 92 [LAC 33:III.1103] Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited.
- 93 [LAC 33:III.1109.B] Outdoor burning of waste material or other combustible material is prohibited.
- 94 [LAC 33:III.1303.B] Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited.
- 95 [LAC 33:III.1305] Prevent particulate matter from becoming airborne by taking all reasonable precautions. These precautions shall include, but not be limited to, those specified in LAC 33:III.1305.A.1-7.
- 96 [LAC 33:III.2113.A] Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5.
- 97 [LAC 33:III.219] Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance.
- 98 [LAC 33:III.2901.D] Discharges of odorous substances at or beyond property lines which cause a perceived odor intensity of six or greater on the specified eight point butanol scale as determined by Method 41 of LAC 33:III.2901.G are prohibited.
- 99 [LAC 33:III.2901.F] If requested to monitor for odor intensity, take and transport samples in a manner which minimizes alteration of the samples either by contamination or loss of material. Evaluate all samples as soon after collection as possible in accordance with the procedures set forth in LAC 33:III.2901.G.
- 100 [LAC 33:III.5105.A.1] Do not construct or modify any stationary source subject to any standard set forth in LAC 33:III Chapter 51. Subchapter A without first obtaining written authorization from DEQ in accordance with LAC 33:III. Chapter 51. Subchapter A, after the effective date of the standard.
- 101 [LAC 33:III.5105.A.2] Do not cause a violation of any ambient air standard listed in LAC 33:III.Table 51.2, unless operating in accordance with LAC 33:III.5109.B.

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****AI 2083 AI-2083 - Union Carbide Corp - SCO**

- 102 [LAC 33:III.5105.A.3] Do not build, erect, install, or use any article, machine, equipment, process, or method, the use of which conceals an emission that would otherwise constitute a violation of an applicable standard.
- 103 [LAC 33:III.5105.A.4] Do not fail to keep records, notify, report or revise reports as required under LAC 33:III. Chapter 51.Subchapter A.
- 104 [LAC 33:III.5107.A.2] Include a certification statement with the annual emission report and revisions to any emission report that attests that the information contained in the emission report is true, accurate, and complete, and that is signed by a responsible official, as defined in LAC 33:III.502. Include the full name of the responsible official, title, signature, date of signature and phone number of the responsible official.
- 105 [LAC 33:III.5107.A] Submit Annual Emissions Report: Due annually, by the 31st of March unless otherwise directed by DEQ, to the Office of Environmental Assessment in a format specified by DEQ. Identify the quantity of emissions in the previous calendar year for any toxic air pollutant listed in Table 51.1 or Table 51.3.
- 106 [LAC 33:III.5107.B.1] Submit notification: Due to the Department of Public Safety 24-hour Louisiana Emergency Hazardous Materials Hotline at (225) 925-6595 immediately, but in no case later than 1 hour, after any discharge of a toxic air pollutant into the atmosphere that results or threatens to result in an emergency condition (a condition which could reasonably be expected to endanger the health and safety of the public, cause significant adverse impact to the land, water or air environment, or cause severe damage to property).
- 107 [LAC 33:III.5107.B.2] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, no later than 24 hours after the beginning of any unauthorized discharge into the atmosphere of a toxic air pollutant as a result of bypassing an emission control device, when the emission control bypass was not the result of an upset, and the quantity of the unauthorized bypass is greater than or equal to the lower of the Minimum Emission Rate (MER) in LAC 33:III.5112, Table 51.1, or a reportable quantity (RQ) in LAC 33:III.3931, or the quantity of the unauthorized bypass is greater than one pound and there is no MER or RQ for the substance in question. Submit notification in the manner provided in LAC 33:III.3923.
- 108 [LAC 33:III.5107.B.3] Submit notification: Due to SPOC, except as provided in LAC 33:III.5107.B.6, immediately, but in no case later than 24 hours after any unauthorized discharge of a toxic air pollutant into the atmosphere that does not cause an emergency condition, the rate or quantity of which is in excess of that allowed by permit, compliance schedule, or variance, or for upset events that exceed the reportable quantity in LAC 33:III.3931.
- 109 [LAC 33:III.5107.B.4] Submit notification in the manner provided in LAC 33:III.3923.
- 110 [LAC 33:III.5107.B.5] Submit written report: Due by certified mail to SPOC within seven calendar days of learning of any such discharge or equipment bypass as referred to in LAC 33:III.5107.B.1 through B.3. Include the information specified in LAC 33:III.5107.B.4.a.i through B.4.a.vii.
- Report all discharges to the atmosphere of a toxic air pollutant from a safety relief device, a line or vessel rupture, a sudden equipment failure, or a bypass of an emission control device, regardless of quantity, IF THEY CAN BE MEASURED AND CAN BE RELIABLY QUANTIFIED USING GOOD ENGINEERING PRACTICES, to DEQ along with the annual emissions report and where otherwise specified. Include the identity of the source, the date and time of the discharge, and the approximate total loss during the discharge.
- 111 [LAC 33:III.5109.C] Develop a standard operating procedure (SOP) within 120 days after achieving or demonstrating compliance with the standards specified in LAC 33:III. Chapter 51. Detail in the SOP all operating procedures or parameters established to ensure that compliance with the applicable standards is maintained and address operating procedures for any monitoring system in place, specifying procedures to ensure compliance with LAC 33:III.5113.C.5. Make a written copy of the SOP available on site or at an alternate approved location for inspection by DEQ. Provide a copy of the SOP within 30 days upon request by DEQ.
- 112 [LAC 33:III.5113.A.1] Submit notification in writing: Due to SPOC not more than 60 days nor less than 30 days prior to initial start-up. Submit the anticipated date of the initial start-up.

**SPECIFIC REQUIREMENTS**

**AI ID:** 2083 - Union Carbide Corp - St Charles Operations  
**Activity Number:** PER20090006  
**Permit Number:** 476-V2  
**Air - Title V Regular Permit Renewal**

**AI 2083 AI-2083 - Union Carbide Corp - SCO**

- 113 [LAC 33:III.5113.A.2] Submit notification in writing: Due to SPOC within 10 working days after the actual date of initial start-up of the source. Submit the actual date of initial start-up of the source.
- An individual or company contracted to perform a demolition or renovation activity which disturbs RACM must be recognized by the Licensing Board for Contractors to perform asbestos abatement, and shall meet the requirements of LAC 33:III.5151.F.2 and F.3 for each demolition or renovation activity.
- 115 [LAC 33:III.5609.A.1.b] Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 5 when the administrative authority declares an Air Pollution Alert.
- 116 [LAC 33:III.5609.A.2.b] Activate the preplanned strategy listed in LAC 33:III.5611.Table 6 when the administrative authority declares an Air Pollution Warning.
- 117 [LAC 33:III.5609.A.3.b] Activate the preplanned abatement strategy listed in LAC 33:III.5611.Table 7 when the administrative authority declares an Air Pollution Emergency.
- 118 [LAC 33:III.5609.A] Prepare standby plans for the reduction of emissions during periods of Air Pollution Alert, Air Pollution Warning and Air Pollution Emergency. Design standby plans to reduce or eliminate emissions in accordance with the objectives as set forth in LAC 33:III.5611.Tables 5, 6, and 7.
- 119 [LAC 33:III.5901.A] Comply with the provisions in 40 CFR 68, except as specified in LAC 33:III.5901.
- 120 [LAC 33:III.5907] Identify hazards that may result from accidental releases of the substances listed in 40 CFR 68.130, Table 59.0 of LAC 33:III.5907, or Table 59.1 of LAC 33:III.5913 using appropriate hazard assessment techniques, design and maintain a safe facility, and minimize the off-site consequences of accidental releases of such substances that do occur.
- 121 [LAC 33:III.5911.C] Submit amended registration: Due to the Office of Environmental Compliance within 60 days after the information in the submitted registration is no longer accurate.
- 122 [LAC 33:III.919.D] Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year unless otherwise directed. Submit emission inventory data in the format specified by the Office of Environmental Assessment. Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A-D.
- 123 [LAC 33:III.927] Report the unauthorized discharge of any air pollutant into the atmosphere in accordance with LAC 33:1.Chapter 39, Notification Regulations and Procedures for Unauthorized Discharges. Submit written reports to the department pursuant to LAC 33:1.3925. Submit timely and appropriate follow-up reports detailing methods and procedures to be used to prevent similar atmospheric releases.

**EQT 0111 27 - Analyzer Fast Purge Header Vent #1**

- 124 [LAC 33:III.2115.K] Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.
- Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. MACT is determined to be compliance with LAC 33:III.2115, as applicable.

**EQT 0114 46K - Regenerator Startup/Shutdown Vent**

**SPECIFIC REQUIREMENTS**

**AI ID: 2083 - Union Carbide Corp - St Charles Operations**  
**Activity Number: PER20090006**  
**Permit Number: 476-V2**  
**Air - Title V Regular Permit Renewal**

**EQT 0114 46K - Regenerator Startup/Shutdown Vent**

- 127 [LAC 33:III.2.115.K] Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.  
 Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 128 [LAC 33:III.5.107.A.2] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.
- 129 [LAC 33:III.5109.A.1] MACT is determined to be compliance with LAC 33:III.2115, as applicable.

**EQT 0116 46L - Catalytic Oxidation Unit (COU)**

- This source is subject to 40 CFR 60 Subpart NNN and also to 40 CFR 63 Subpart G. The owner or operator elects to control the process vent to the levels required in 40 CFR 63 Subpart G, and is exempted from the requirements of 40 CFR 60 Subpart NNN as described in 40 CFR 63.110(d)(6). [40 CFR 63.110(d)(6)]  
 Organic HAP >= 98 % reduction by weight, or <= 20 ppmv, whichever is less stringent, as determined using the methods in 40 CFR 63.116(c). For combustion devices, calculate emission reduction or concentration on a dry basis, corrected to 3-percent oxygen.
- Facility will maintain 99.9% reduction efficiency as claimed.
- Subpart G. [40 CFR 63.113(a)(2)]  
 Which Months: All Year Statistical Basis: None specified  
 Temperature monitored by temperature monitoring device continuously. Equip the temperature monitoring device with a continuous recorder and install in the gas stream immediately before and after the catalyst bed. Subpart G. [40 CFR 63.114(a)(1)]  
 Which Months: All Year Statistical Basis: None specified
- The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in 40 CFR 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under 63.116 of this subpart, if the prior performance test was conducted using the same methods specified in 63.116 and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.
- [40 CFR 63.114(e)]  
 Conduct a performance test using the procedures in 40 CFR 63.116(c)(1) through (c)(4). Subpart G  
 Performance Test conducted July 21, 2005. [40 CFR 63.116(c)]  
 Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]  
 For each parameter monitored according to tables 3 or 4 of this subpart or paragraph (e) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment.  
 [40 CFR 63.117(f)]
- 134 [40 CFR 63.116(c)]  
 135 [40 CFR 63.117(a)]  
 136 [40 CFR 63.117(f)]

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations

Activity Number: PER20090006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

**EQT 0116 46L - Catalytic Oxidation Unit (COU)**

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.118(a)(1) through (a)(4). Subpart G. [40 CFR 63.118(a)]

If a closed vent system subject to 40 CFR 63.148 is also subject to 40 CFR 63.172 of subpart H, the owner or operator shall comply with the provisions of 40 CFR 63.172 of subpart H, and is exempt from the requirements of 40 CFR 63.148. [40 CFR 63.148(k)]  
Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

Compliance with NESMAP 40 CFR 63 Subpart G has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**EQT 0117 46M - Oxide I Flare**

Design and operate for no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any two consecutive hours. Subpart A. [40 CFR 60.18(c)(1)]

Operate with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f)(2). Subpart A. [40 CFR 60.18(c)(2)]  
Heat content  $\geq 300 \text{ BTU/scf}$  ( $11.2 \text{ MJ/m}^3$ ). Determine the net heating value of the gas being combusted by the methods specified in 40 CFR 60.18(f)(3). Subpart A. [40 CFR 60.18(c)(3)(ii)]

Which Months: All Year Statistical Basis: None specified  
Exit Velocity  $< \frac{\text{ft}}{\text{sec}}(\text{Vmax})$ . Determine Vmax using the method specified in 40 CFR 60.18(f)(6). Subpart A. [40 CFR 60.18(c)(5)]

Which Months: All Year Statistical Basis: None specified  
Monitor flares to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how to monitor flares. Subpart A. [40 CFR 60.18(d)]  
Operate at all times when emissions may be vented to the flare. Subpart A. [40 CFR 60.18(e)]

Presence of a flame monitored by flame monitor continuously. Use a thermocouple or any other equivalent device to detect the presence of a flare pilot flame. Subpart A. [40 CFR 60.18(f)(2)]  
Which Months: All Year Statistical Basis: None specified  
Combust the emissions in a flare that meets the requirements of 40 CFR 60.18. Subpart NNN. [40 CFR 60.662(b)]

Presence of a flame recordkeeping by electronic or hard copy continuously. [40 CFR 60.663(b)(1)]  
Presence of a flame monitored by heat sensing device continuously. Use a heat sensing device, such as an ultra-violet beam sensor or thermocouple, at the pilot light to monitor the continuous presence of a flame. Subpart NNN. [40 CFR 60.663(b)(1)]

Which Months: All Year Statistical Basis: None specified  
Flow monitored by flow indicator hourly. Monitor the vent stream flow to the flare. Install the flow indicator in the vent stream from each affected facility at a point closest to the flare and before being joined with any other vent stream. Subpart NNN. [40 CFR 60.663(b)(2)]  
Which Months: All Year Statistical Basis: None specified  
Flow recordkeeping by electronic or hard copy hourly. Record the vent stream flow to the flare at least once every hour for each affected facility. Subpart NNN. [40 CFR 60.663(b)(2)]

Run all affected facilities at full operating conditions and flow rates during any performance test intended to demonstrate compliance with 40 CFR 60.662. Subpart NNN. [40 CFR 60.664(a)]

**SPECIFIC REQUIREMENTS**

**AI ID: 2083 - Union Carbide Corp - St Charles Operations**  
**Activity Number: PER2009006**  
**Permit Number: 476-V2**  
**Air - Title V Regular Permit Renewal**

**EQT 0117 46M - Oxide I Flare**

- 154 [40 CFR 60.664(b)] Use the 40 CFR 60 appendix A methods listed in 40 CFR 60.664(b) through (h), except as provided under 40 CFR 60.60.8(b), as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under 40 CFR 60.662(a). Subpart NNN. [40 CFR 60.664(b)]
- 155 [40 CFR 60.665(b)] Performance Test Data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain up-to-date, readily accessible records of the required compliance information listed in 40 CFR 60.665(b) through (j) as applicable measured during each performance test required under 40 CFR 60.8. Submit the same specified data in the reports of all subsequently required performance tests where either the emission control efficiency of a control device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined. Subpart NNN. [40 CFR 60.665(b)]
- 156 [40 CFR 63.11(b)(1)] Monitor flares to assure that they are operated and maintained in conformance with their designs. Subpart A. [40 CFR 63.11(b)(1)]
- 157 [40 CFR 63.11(b)(3)] Operate at all times when emissions may be vented to the flare. Subpart A. [40 CFR 63.11(b)(3)]
- 158 [40 CFR 63.11(b)(4)] Design and operate for no visible emissions, as determined using Test Method 22 in Appendix A of 40 CFR 60, except for periods not to exceed a total of 5 minutes during any two consecutive hours. Subpart A. [40 CFR 63.11(b)(4)]
- 159 [40 CFR 63.11(b)(5)] Operate with a flame present at all times. Subpart A. [40 CFR 63.11(b)(5)]
- 160 [40 CFR 63.11(b)(5)] Presence of a flame monitored by flame monitor continuously. Use a thermocouple or any other equivalent device to detect the presence of a flame. Subpart A. [40 CFR 63.11(b)(5)]
- 161 [40 CFR 63.11(b)(6)(ii)] Which Months: All Year Statistical Basis: None specified Heat content >= 300 BTU/scf(11.2 MJ/scm<sup>3</sup>). Determine the net heating value of the gas being combusted using the equation specified in 40 CFR 63.11(b)(6)(ii). Subpart A. [40 CFR 63.11(b)(6)(ii)]
- 162 [40 CFR 63.11(b)(8)] Which Months: All Year Statistical Basis: None specified Air-assisted flare is designed for and operated with exit velocity less than maximum velocity (Vmax). Determine Vmax using the equation specified in 40 CFR 63.11(b)(8). Subpart A. [40 CFR 63.11(b)(8)]
- 163 [40 CFR 63.113(a)(1)(i)] Comply with the provisions of 40 CFR 63.11(b). Subpart G. [40 CFR 63.113(a)(1)(i)]
- 164 [40 CFR 63.114(a)(2)] Presence of a flame monitored by the regulation's specified method(s) continuously. Subpart G. [40 CFR 63.114(a)(2)]
- 165 [40 CFR 63.114(e)] Which Months: All Year Statistical Basis: None specified The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a), (b), and (c) of this section. In order to establish the range, the information required in 40 CFR 63.1152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under 63.116 of this subpart, if the prior performance test was conducted using the same methods specified in 63.116 and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.
- 166 [40 CFR 63.116(a)(1)] [40 CFR 63.116(a)(2)] [40 CFR 63.116(a)(3)] [40 CFR 63.116(a)(4)] Conduct a visible emission test using the techniques specified in 40 CFR 63.11(b)(4). Subpart G. [40 CFR 63.116(a)(1)]
- 167 [40 CFR 63.116(a)(2)] Determine the net heating value of the gas being combusted using the techniques specified in 40 CFR 63.11(b)(6). Subpart G. [40 CFR 63.116(a)(2)]

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**EAT 0117 46M - Oxide I Flare**

- 168 [40 CFR 63.116(a)(3)] Determine the exit velocity using the techniques specified in either 40 CFR 63.11(b)(7)(i) or 63.11(b)(8), as appropriate. Subpart G. [40 CFR 63.116(a)(3)]
- 169 [40 CFR 63.117(f)] For each parameter monitored according to tables 3 or 4 of this subpart or paragraph (e) of this section, the owner or operator shall establish a range for the parameter that indicates proper operation of the control or recovery device. In order to establish the range, the information required in 63.152(b) of this subpart shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. [40 CFR 63.117(f)]
- 170 [40 CFR 63.118(a)] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.118(a)(1) through (a)(4). Subpart G. [40 CFR 63.118(a)]
- 171 [40 CFR 63.129] Equipment/operational data recordkeeping by electronic or hard copy continuously. Keep records of the information specified in 40 CFR 63.129(a) through (f). Subpart G.
- 172 [40 CFR 63.138(a)] Comply with applicable performance standards for treating Group 1 wastewater streams. The owner or operator shall comply with the requirements as specified in paragraphs (a)(1) through (a)(6) of this section. Where multiple compliance options are provided, the options may be used in combination for different wastewater streams and/or for different compounds (e.g., Table 8 versus Table 9 compounds) in the same wastewater streams, except where otherwise provided in this section. Once a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream has been treated in accordance with this subpart, it is no longer subject to the requirements of this subpart. [40 CFR 63.138(a)]
- 173 [40 CFR 63.139(a)] For each control device or combination of control devices used to comply with the provisions in §§63.133 through 63.138 of this subpart, the owner or operator shall operate and maintain the control device or combination of control devices in accordance with the requirements of paragraphs (b) through (f) of this section. [40 CFR 63.139(a)]
- 174 [40 CFR 63.139(b)] Ensure that the control device is operating whenever organic hazardous air pollutants emissions are vented to the control device. Subpart G. [40 CFR 63.139(b)]
- 175 [40 CFR 63.139(c)(3)] Comply with the requirements of 40 CFR 63.11(b). Subpart G. [40 CFR 63.139(c)(3)]
- 176 [40 CFR 63.139(d)] Demonstrate that each control device or combination of control devices achieves the appropriate conditions specified in 40 CFR 63.139(c) by using one or more of the methods specified in 40 CFR 63.138(d)(1), (d)(2), or (d)(3), except as specified in (d)(4). Subpart G. [40 CFR 63.139(d)]
- 177 [40 CFR 63.139(f)] Make a first attempt at repair as soon as practicable but no later than 5 calendar days after identification of gaps, cracks, tears, or holes in ductwork, piping, or connections to covers and control devices during an inspection. Complete repairs no later than 15 calendar days after identification or discovery of the defect. Subpart G. [40 CFR 63.139(f)]
- 178 [40 CFR 63.140] Comply with applicable requirements for delay of repair of equipment used to manage and/or treat process wastewater streams.
- 179 [40 CFR 63.143(e)(1)] Comply with the monitoring requirements specified in 40 CFR 63 Subpart G Table 13. Subpart G. [40 CFR 63.143(e)(1)]
- 180 [40 CFR 63.145] Demonstrate compliance with 40 CFR 63.138 by conducting either a design evaluation or performance test as specified in 40 CFR 63.145(a) through (j). Subpart G.

**SPECIFIC REQUIREMENTS**

**AI ID: 2083 - Union Carbide Corp - St Charles Operations**  
**Activity Number: PER20090006**  
**Permit Number: 476-V2**  
**Air - Title V Regular Permit Renewal**

**EQT 0117 46M - Oxide I Flare**

- 181 [LAC 33:III.1105] Submit notification. Due to the Office of Environmental Compliance as soon as possible after the start of burning of pressure valve releases for control over process upsets. Notify in accordance with LAC 33:III.3923. Notification is required only if the upset cannot be controlled in six hours.
- 182 [LAC 33:III.1105] Opacity <= 20 percent, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets.
- 183 [LAC 33:III.1311.C] Which Months: All Year Statistical Basis: None specified
- 184 [LAC 33:III.5107.A.2] Opacity <= 20 percent; except emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes.
- 185 [LAC 33:III.5109.A.1] Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- Compliance with NESHAP 40 CFR 63 Subpart G has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**EQT 0118 46N - Methane Purification System Vent**

- 186 [LAC 33:III.2115.K] Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.
- 187 [LAC 33:III.2115.K] Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.

**EQT 0119 46P - Compressor Seal Oil Vent**

- 188 [LAC 33:III.2115.K] Equipment/operational data recordkeeping by electronic or hard copy as needed. Maintain records to demonstrate that the criteria are being met for any exemption claimed. Maintain records on the premises for at least two years and make such information available to representatives of the Louisiana Department of Environmental Quality and the Environmental Protection Agency upon request.
- 189 [LAC 33:III.5107.A.2] Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 190 [LAC 33:III.5109.A.1] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. MACT is determined to be compliance with LAC 33:III.2115, as applicable.

**EQT 0122 2200 - Tetratin Collection Pot Vent**

- 191 [LAC 33:III.5107.A.2] Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
**Activity Number:** PER20090006  
**Permit Number:** 476-V2  
**Air - Title V Regular Permit Renewal**

**EQT 0122 2200 - Tetralin Collection Pot Vent**

192 [LAC 33:III.5109.A.1]

Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ.  
 MACT is determined to be no additional control.  
 Class I pollutant emitted: Naphthalene.

**EQT 0128 PG-E-806 - Regenerator Condenser**

193 [40 CFR 63.113(a)(2)]

Organic HAP  $\geq 98\%$  reduction by weight, or  $\leq 20$  ppmv, whichever is less stringent, as determined using the methods in 40 CFR 63.116(c).  
 Subpart G. [40 CFR 63.113(a)(2)]

Which Months: All Year Statistical Basis: None specified

Bypass lines: Flow monitored by flow indicator once every 15 minutes. Equip the flow indicator with a recorder that takes a reading at least once every 15 minutes and install at the entrance to any bypass line that could divert the gas stream to the atmosphere. Subpart G. [40 CFR 63.114(d)(1)]

Which Months: All Year Statistical Basis: None specified

Bypass lines: Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart G. [40 CFR 63.114(d)(2)]

Bypass lines: Seal or closure mechanism monitored by visual inspection/determination monthly to ensure that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart G. [40 CFR 63.114(d)(2)]

Which Months: All Year Statistical Basis: None specified

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]  
 Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.

194 [40 CFR 63.114(d)(1)]

Compliance with NESHAP 40 CFR 63 Subpart G has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**EQT 0129 PG-426 - Oxide I Refining System Vent Scrubber**

195 [40 CFR 63.114(d)(2)]

Vent Stream is subject to applicable requirements of 40 CFR 60 Subpart NNN. [40 CFR 60.660(a)]

Group 1 process vent stream subject to the provisions of 40 CFR 60 Subpart NNN and 40 CFR 63 Subpart G, is required to comply only with the provisions of 40 CFR 63 Subpart G. [40 CFR 63.110(d)(4)]

Reduce emissions of organic HAP using a flare. Do not vent halogenated vent streams to a flare. Subpart G. [40 CFR 63.113(a)(1)]

Bypass lines: Flow monitored by flow indicator once every 15 minutes. Equip the flow indicator with a recorder that takes a reading at least once every 15 minutes and install at the entrance to any bypass line that could divert the gas stream to the atmosphere. Subpart G. [40 CFR 63.114(d)(1)]

Which Months: All Year Statistical Basis: None specified

Bypass lines: Seal or closure mechanism monitored by visual inspection/determination monthly to ensure that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart G. [40 CFR 63.114(d)(2)]  
 Which Months: All Year Statistical Basis: None specified

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****EQT 0129 PG-426 - Oxide I Refining System Vent Scrubber**

- 205 [40 CFR 63.114(d)(2)]  
Bypass lines: Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart G. [40 CFR 63.114(d)(2)]
- 206 [40 CFR 63.117(a)]  
Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep up-to-date, readily accessible records of the data specified in 40 CFR 63.117(a)(4) through (a)(8), as applicable. Subpart G. [40 CFR 63.117(a)]
- 207 [40 CFR 63.118(a)]  
Comply with applicable periodic recordkeeping and reporting requirements for control device. [40 CFR 63.118(a)]
- 208 [40 CFR 63.118(f)]  
Submit applicable information for process vents in periodic reports. [40 CFR 63.118(f)]
- 209 [40 CFR 63.139(c)(2)]  
Total Organic HAP or Total Organic Compounds (less methane and ethane)  $\geq 95\%$  reduction by weight; or Total Organic HAP or TOC (less methane and ethane)  $< 20$  ppmv, whichever is less stringent. Subpart G. [40 CFR 63.139(c)(2)]
- 210 [LAC 33:III.5107.A.2]  
Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 211 [LAC 33:III.5109.A.1]  
Compliance with NESHAP 40 CFR 63 Subpart G has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**EQT 0131 RL-E-132 - Evaporator Vent Condenser**

- 212 [40 CFR 60.662(b)]  
Combust the emissions in a flare that meets the requirements of 40 CFR 60.18. Subpart NNN. [40 CFR 60.662(b)]
- 213 [40 CFR 60.664(a)]  
Run all affected facilities at full operating conditions and flow rates during any performance test intended to demonstrate compliance with 40 CFR 60.662. Subpart NNN. [40 CFR 60.664(a)]
- 214 [40 CFR 60.664(b)]  
Use the 40 CFR 60 appendix A methods listed in 40 CFR 60.664(b) through (h), except as provided under 40 CFR 60.60.8(b), as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under 40 CFR 60.662(a). Subpart NNN. [40 CFR 60.664(b)]
- 215 [40 CFR 60.665(a)]  
Notify the DEQ with the specific provisions of 40 CFR 60.662 (40 CFR 60.662(a), (b), or (c)) with which the facility operator has elected to comply. Submit the notification with the notification of initial start-up required in 40 CFR 60.7(a)(3). Notify the DEQ 90 days before implementing any change in the provision of 40 CFR 60.662 that the operator elects to comply with. Conduct the performance test specified by 40 CFR 60.664 within 180 days after the change. Subpart NNN. [40 CFR 60.665(a)]
- 216 [40 CFR 60.665(l)]  
Submit report: Due semiannually. Submit initial report within 6 months after the initial start-up date. Include the information outlined in 40 CFR 60.665(l)(1) through (l)(7). Subpart NNN. [40 CFR 60.665(l)]
- 217 [40 CFR 63.138(a)]  
Comply with applicable performance standards for treating Group 1 wastewater streams. [40 CFR 63.138(a)]
- 218 [40 CFR 63.139(f)]  
Make a first attempt at repair as soon as practicable but no later than 5 calendar days after identification of gaps, cracks, tears, or holes in ductwork, piping, or connections to covers and control devices during an inspection. Complete repairs **no** later than 15 calendar days after identification or discovery of the defect. Subpart G. [40 CFR 63.139(f)]
- 219 [40 CFR 63.140]  
Comply with applicable requirements for delay of repair of equipment used to manage and/or treat process wastewater streams.
- 220 [LAC 33:III.5107.A.2]  
Include emissions of all toxic air pollutants listed in LAC 33:III.5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5105.B.
- 221 [LAC 33:III.5109.A.1]  
Compliance with NESHAP 40 CFR 63 Subparts F and G has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2  
 Air - Title V Regular Permit Renewal

**EQT 0135 PG-111 - EDC Feed Tank**

- 222 [LAC 33:III:2103.A] Maintain working pressures sufficient at all times under normal operating conditions to prevent vapor or gas loss to the atmosphere.
- 223 [LAC 33:III:2103.H.3] Determine VOC maximum true vapor pressure using the methods in LAC 33:III:2103.H.3.a-e.
- 224 [LAC 33:III:2103.I.] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III:2103.I.1 - 7, as applicable.
- 225 [LAC 33:III:5107.A.2] Include emissions of all toxic air pollutants listed in LAC 33:III:5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III:5105.B.
- 226 [LAC 33:III:5109.A.1] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. MACT is determined to be compliance with LAC 33:III:2103 as applicable.

**EQT 0239 PG-455 - Aldehyde Stripper**

- 227 [40 CFR 63.138(d)] Operate and maintain a steam stripper that meets the requirements of 40 CFR 63.138(d)(1) through (d)(6). Subpart G. [40 CFR 63.138(d)]
- 228 [40 CFR 63.143(b)] Comply with the monitoring requirements specified in 40 CFR 63 Subpart G Table 12. Subpart G. [40 CFR 63.143(b)]
- 229 [40 CFR 63.143(e)] Comply with applicable monitoring requirements for control device used to manage and/or treat process wastewater streams. [40 CFR 63.143(e)]

**EQT 1072 PG-301 - Tetralin Surge Tank**

- 230 [LAC 33:III:2103.A] Equip with a submerged fill pipe.
- 231 [LAC 33:III:2103.H.3] Determine VOC maximum true vapor pressure using the methods in LAC 33:III:2103.H.3.a-e.
- 232 [LAC 33:III:2103.I.] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Keep records of the information specified in LAC 33:III:2103.I.1 - 7, as applicable.
- 233 [LAC 33:III:5107.A.2] Include emissions of all toxic air pollutants listed in LAC 33:III:5112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III:5105.B.
- 234 [LAC 33:III:5109.A.1] Control emissions of toxic air pollutants to a degree that constitutes Maximum Achievable Control Technology (MACT) as approved by DEQ. MACT is determined to be compliance with LAC 33:III:2103 as applicable.

**EQT 1073 MW - Maintenance Wastewater**

- 235 [40 CFR 63.105(d)] Maintenance wastewater: Incorporate the procedures described in 40 CFR 63.105(b) and (c) as part of the start-up, shutdown and malfunction plan required under 40 CFR 63.6(e)(3). Subpart F. [40 CFR 63.105(d)]
- 236 [40 CFR 63.105(e)] Maintenance wastewater: Equipment/operational data recordkeeping by electronic or hard copy at the approved frequency. Maintain a record of the information required by 40 CFR 63.105(b) and (c) as part of the start-up, shut-down, and malfunction plan required under 40 CFR 63.6(e)(3). Subpart F. [40 CFR 63.105(e)]

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****EQT 1073 MW - Maintenance Wastewater**

237 [40 CFR 63.105]

Maintenance wastewater: Prepare a description of maintenance procedures for the management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair and during periods which are not shutdowns as specified in 40 CFR 63.105(b)(1) through (b)(3). Modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. Subpart F.

**EQT 1074 PW - Process Wastewater**

238 [40 CFR 63.132(a)(1)]

Determine whether each wastewater stream requires control for Table 9 compounds by complying with the requirements in 40 CFR 63.132(a)(1)(i) or (a)(1)(ii), and (a)(1)(iii). Subpart G. [40 CFR 63.132(a)(1)]

239 [40 CFR 63.132(a)(2)]

For wastewater streams that are Group 1 for Table 9 compounds, comply with paragraphs (a)(2)(i) through (a)(2)(iv) of this section. [40 CFR 63.132(a)(2)]

240 [40 CFR 63.132(a)(3)]

For wastewater streams that are Group 2 for table 9 compounds, comply with the applicable recordkeeping and reporting requirements specified in 40 CFR 63.146(b)(1) and 63.147(b)(8). [40 CFR 63.132(a)(3)]

241 [40 CFR 63.132(c)]

Determine total annual average concentration of Table 9 compounds according to the procedures in 40 CFR 63.144(b), and determine annual average flow rate according to the procedures in 40 CFR 63.144(c), to determine whether a wastewater stream is Group 1 or Group 2 for Table 9 compounds. Redetermine group status for each Group 2 stream, as necessary, to determine whether the stream is Group 1 or Group 2 whenever process changes are made that could reasonably be expected to change the stream to a Group 1 stream Subpart G. [40 CFR 63.132(c)]

242 [40 CFR 63.132(f)]

Do not discard liquid or solid organic materials with a concentration of greater than 10,000 ppm of Table 9 compounds (as determined by analysis of the stream composition, engineering calculations, or process knowledge, according to the provisions of 40 CFR 63.144(b)) from a chemical manufacturing process unit to water or wastewater, unless the receiving stream is managed and treated as a Group 1 wastewater stream. Subpart G. [40 CFR 63.132(f)]

243 [40 CFR 63.138(a)]

Comply with the applicable performance standards for treating Group 1 wastewater streams. [40 CFR 63.138(a)]

244 [40 CFR 63.138(b)(2)]

Comply with applicable requirements specified in 40 CFR 63.138 (d), (e), (f), (g), (h), or (i) of this section for the control of Group 1 wastewater streams for Table 9 compounds. [40 CFR 63.138(b)(2)]

245 [40 CFR 63.138(d)]

Operate and maintain a steam stripper that meets the requirements of 40 CFR 63.138(d)(1) through (d)(6). Subpart G. [40 CFR 63.138(d)] Demonstrate compliance with 40 CFR 63.138(b)(1), (c)(1), (e), (f), and/or (g) using the procedures in either 40 CFR 63.138(j)(1) or (j)(2), except as specified in 40 CFR 63.138(j)(3) or (h). Subpart G. [40 CFR 63.138(j)]

247 [40 CFR 63.138(k)(1)]

Residuals: Recycle the wastewater stream residual to a production process or sell the residual for the purpose of recycling. Subpart G. [40 CFR 63.138(k)(1)]

Residuals: Return the wastewater stream residual to the treatment process. Subpart G. [40 CFR 63.138(k)(2)]

248 [40 CFR 63.138(k)(2)]

Residuals (Table 8 and/or Table 9 compounds): Organic HAP  $\geq 99\%$  destruction efficiency, as determined by the procedures specified in 40 CFR 63.145(c) or (d). Subpart G. [40 CFR 63.138(k)(3)]

250 [40 CFR 63.138(k)(4)]

Residuals: Comply with the requirements for RCRA treatment options specified in 40 CFR 63.138(h). Subpart G. [40 CFR 63.138(k)(4)]

**SPECIFIC REQUIREMENTS****AID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****EQT 1074 PW - Process Wastewater**

251 [40 CFR 63.139(f)]

Except as provided in 40 CFR 63.140, if gaps, cracks, tears, or holes are observed in ductwork, piping, or connections to covers and control devices during an inspection, a first effort to repair shall be made as soon as practical but no later than 5 calendar days after identification. Repair shall be completed no later than 15 calendar days after identification or discovery of the defect.

[40 CFR 63.139(f)]

Comply with applicable requirements for delay of repair of equipment used to manage and/or treat process wastewater streams.

252 [40 CFR 63.140]

Comply with the inspection requirements in 40 CFR 63 Subpart G Table 11. Subpart G. [40 CFR 63.143(a)]

253 [40 CFR 63.143(a)]

Comply with applicable test methods and procedures to determine applicability and which wastewater streams require control.

254 [40 CFR 63.144]

Comply with applicable reporting requirements for process wastewater.

255 [40 CFR 63.146]

Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records specified in 40

256 [40 CFR 63.147]

CFR 63.147(a) through (f), as applicable. Subpart G.

Comply with the provisions of 40 CFR 63 Subpart G Table 35 for each item of equipment meeting all the criteria specified in 40 CFR 63.149(b)

257 [40 CFR 63.149(a)]

through (d) and either (e)(1) or (e)(2). Subpart G. [40 CFR 63.149(a)]

**EQT 1075 HX - Heat Exchange Systems**

258 [40 CFR 63.104(b)]

Heat exchange systems (cooling water): HAP monitored by the regulation's specified method(s) monthly for the first 6 months and quarterly thereafter to detect leaks. Monitor for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system. Subpart F. [40 CFR 63.104(b)]

Which Months: All Year Statistical Basis: None specified

Heat exchange systems: Maintain, at all times, the monitoring plan currently in use. Maintain on-site, or accessible from a central location by computer or other means that provide access within 2 hours after a request. If a monitoring plan is superseded, retain the most recent superseded plan at least until 5 years from the date of its creation. Retain the superseded plan on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after its creation. Subpart F. [40 CFR 63.104(c)(3)]

Heat exchange systems: Prepare and implement a monitoring plan that documents the procedures that will be used to detect leaks of process fluids into cooling water. Require monitoring of one or more surrogate indicators or monitoring of one or more process parameters or other conditions that indicate a leak. Include the information specified in 40 CFR 63.104(c)(1)(i) and (ii). Monitor no less frequently than monthly for the first six months and quarterly thereafter to detect leaks. If a substantial leak is identified by methods other than those described in the monitoring plan and method(s) specified in the plan could not detect the leak, revise the plan and document the basis for the changes. Complete revisions to the plan no later than 180 days after discovery of the leak. Subpart F. [40 CFR 63.104(c)]

Heat exchange systems: Repair leaks as soon as practicable but not later than 45 calendar days after receiving results of monitoring tests indicating a leak, if a leak is detected according to the criteria of 40 CFR 63.104(b) or (c). Once the leak has been repaired, confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later. Subpart F. [40 CFR 63.104(d)]

Heat exchange systems: Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Retain the records identified in 40 CFR 63.104(f)(i) through (iv) as specified in 40 CFR 63.103(c)(1). Subpart F. [40 CFR 63.104(f)]

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER2009006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****EQT 1076 P-113 - Evaporator Vent Condensate Pot**

- 263 [40 CFR 63.133(a)(1)] Operate and maintain a fixed roof. Subpart G. [40 CFR 63.133(a)(1)] Equipment/operational data monitored by technically sound method once initially and once every six months. Monitor for improper work practices in accordance with 40 CFR 63.143, except as specified in 40 CFR 63.133(e). Subpart G. [40 CFR 63.133(f)]
- 264 [40 CFR 63.133(f)] Which Months: All Year Statistical Basis: None specified
- 265 [40 CFR 63.133(g)] Equipment/operational data monitored by technically sound method at the regulation's specified frequency. Inspect each wastewater tank for control equipment failures as defined in 40 CFR 63.133(g)(1)(i) through (g)(1)(ix) according to the schedule in 40 CFR 63.133(g)(2) and (g)(3).

Subpart G. [40 CFR 63.133(g)]

Which Months: All Year Statistical Basis: None specified

- When an improper work practice or a control equipment failure is identified, make first efforts at repair no later than 5 calendar days after identification. Complete repair within 45 calendar days after identification. Subpart G. [40 CFR 63.133(h)]
- 267 [40 CFR 63.143(a)] Comply with the inspection requirements in 40 CFR 63 Subpart G Table 11. Subpart G. [40 CFR 63.143(a)]

268 [40 CFR 63.147] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records specified in 40 CFR 63.147(a) through (f), as applicable. Subpart G.

- 269 [40 CFR 63.149(a)] Comply with the provisions of 40 CFR 63 Subpart G Table 35 for each item of equipment meeting all the criteria specified in 40 CFR 63.149(b) through (d) and either (e)(1) or (e)(2). Subpart G. [40 CFR 63.149(a)]
- 270 [LAC 33:III.5.107.A.2] Include emissions of all toxic air pollutants listed in LAC 33:III.5.112, Table 51.1 or 51.3 in the Annual Emissions Report unless exempted under LAC 33:III.5.105.B.

271 [LAC 33:III.5.109.A.1] Compliance with NESHAP 40 CFR 63 Subpart G has been determined to be compliance with MACT in accordance with LAC 33:III.5.109.A.2.

**FUG 0003 46Q - Fugitive Emissions**

- 272 [40 CFR 63.162(c)] Identify each piece of equipment in a process unit such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H. Subpart H. [40 CFR 63.162(c)]
- 273 [40 CFR 63.162(f)] Clearly identify leaking equipment, for leaking equipment detected as specified in 40 CFR 63.163, 40 CFR 63.164, 40 CFR 63.168, 40 CFR 63.169, and 40 CFR 63.172 through 63.174. The identification may be removed after the equipment is repaired, except for valves or for connectors subject to 40 CFR 63.174(c)(1)(i). The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(1)(D), and no leak has been detected during the follow-up monitoring. If electing to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring. Subpart H. [40 CFR 63.162(f)]
- Pumps in light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, except as provided in 40 CFR 63.162(b) and 63.163(e) through (i). If a reading of 10,000 ppm (phase I); 5,000 ppm (phase II); or 5,000 ppm (phase III, pumps handling polymerizing monomers), 2,000 ppm (phase III, pumps in food/medical service), or 1,000 ppm (phase III, all other pumps) or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(1)]
- Which Months: All Year Statistical Basis: None specified

**SPECIFIC REQUIREMENTS****AID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

275 [40 CFR 63.163(b)(3)]

Pumps in light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquids dripping from the pump seal, a leak is detected. If a leak is detected, initiate the repair provisions specified in 40 CFR 63.163(c). Subpart H. [40 CFR 63.163(b)(3)]

276 [40 CFR 63.163(c)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.163(c)(3) and 40 CFR 63.171. Subpart H. [40 CFR 63.163(c)]

277 [40 CFR 63.163(d)(2)]

Pumps in light liquid service: Implement a quality improvement program for pumps that complies with the requirements of 40 CFR 63.176, if in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak. Subpart H. [40 CFR 63.163(d)(2)]

278 [40 CFR 63.163(d)(4)]

Pumps in light liquid service: Determine percent leaking pumps using the equation in 40 CFR 63.163(d)(4). Subpart H. [40 CFR 63.163(d)(4)]

279 [40 CFR 63.163(e)(1)]

Pumps in light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the pump stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-loop system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Subpart H. [40 CFR 63.163(e)(1)]

280 [40 CFR 63.163(e)(2)]

Pumps in light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid service. Subpart H. [40 CFR 63.163(e)(2)]

281 [40 CFR 63.163(e)(3)]

Pumps in light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.163(e)(3)]

Pumps in light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the pump seal. If there are indications of liquid dripping from the pump seal at the time of the weekly inspection, monitor the pump as specified in 40 CFR 63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If an instrument reading of 1,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.163(e)(6). Subpart H. [40 CFR 63.163(e)(4)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.163(e)(6)(i)]

Pumps in light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.163(e)(6)]

Pumps in light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the pump is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.163(e)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.163(e)(6). Subpart H. [40 CFR 63.163(e)]

Which Months: All Year Statistical Basis: None specified

Pumps in light liquid service (unsafe-to-monitor): Determine that the pump is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.163(b) through (d). Subpart H. [40 CFR 63.163(j)(1)]

**SPECIFIC REQUIREMENTS****AID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

287 [40 CFR 63.163(j)(2)]

Pumps in **light liquid** service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the pump as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable. Subpart H. [40 CFR 63.163(j)(2)]

Which Months: All Year Statistical Basis: None specified

288 [40 CFR 63.164(a)]  
289 [40 CFR 63.164(b)]  
Compressors: Equip with a seal system that includes a barrier fluid system and that prevents leakage of process fluid to the atmosphere, except as provided in 40 CFR 63.162(b) and 40 CFR 63.164(h) and (i). Subpart H. [40 CFR 63.164(a)]

Compressors: Operate the seal system with the barrier fluid at a pressure that is greater than the compressor stuffing box pressure; or equip with a barrier fluid system degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid directly into a process stream. Subpart H. [40 CFR 63.164(b)]

Compressors: Ensure that the barrier fluid is not in **light liquid** service. Subpart H. [40 CFR 63.164(c)]

Compressors: Equip each barrier fluid system as described in 40 CFR 63.164(a) through (c) with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.164(d)]

Compressors (sensor): Determine, based on design considerations and operating experience, a criterion that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.164(e)(2)]

Compressors: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.164(g)]

Compressors (no detectable emissions): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially and annually, and at other times requested by DEQ. Subpart H. [40 CFR 63.164(i)(2)]

Which Months: All Year Statistical Basis: None specified

Compressors (sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an alarm, unless the compressor is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criterion determined under 40 CFR 63.164(e)(2), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.164(g). Subpart H.

Which Months: All Year Statistical Basis: None specified

Except during pressure releases, catch pressure relief devices in gas/vapor service shall be operated with an instrument reading of less than 500 ppm above background.

Pressure relief devices in gas/vapor service:

Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) after the pressure release and being returned to organic HAP service, to confirm the condition indicated by an instrument reading of less than 500 ppm above background, as measured by the method specified in 40 CFR 63.180(c). Subpart H. [40 CFR 63.165(a), 40 CFR 63.165(b)(2)]

Which Months: All Year Statistical Basis: None specified

Pressure relief devices in gas/vapor service: After each pressure release, return to a condition indicated by an instrument reading of less than 500 ppm above background, as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.165(b)(1)]

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

298 [40 CFR 63.165(d)(2)]

Pressure relief devices in gas/vapor service (rupture disk): After each pressure release, install a new rupture disk upstream of the pressure relief device as soon as practicable, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR 63.171. Subpart V. [40 CFR 63.165(d)(2)]

299 [40 CFR 63.166]

Sampling connection systems: Equip with a closed-purge, closed-loop, or closed-vent system, except as provided in 40 CFR 63.162(b). Operate the system as specified in 40 CFR 63.166(b). Subpart H.

300 [40 CFR 63.167]

Open-ended valves or lines: Equip with a cap, blind flange, plug, or second valve, except as provided in 40 CFR 63.162(b) and 40 CFR 63.167(d) and (e). Ensure that the cap, blind flange, plug or second valve seals the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. Operate each open-ended valve or line equipped with a second valve in a manner such that the valve on the process fluid end is closed before the second valve is closed. Subpart H.

301 [40 CFR 63.168(c)]

Valves in gas/vapor service or light liquid service (Phase I): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]

Which Months: All Year Statistical Basis: None specified  
Valves in gas/vapor service or light liquid service (Phase II): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Subpart H. [40 CFR 63.168(c)]

Which Months: All Year Statistical Basis: None specified  
Valves in gas/vapor service or light liquid service (Phase III, 2 percent or greater leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly, as specified in 40 CFR 63.180(b); or implement a quality improvement program for valves that complies with the requirements of 40 CFR 63.175 and monitor quarterly. If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). If electing to implement a quality improvement program, follow the procedures in 40 CFR 63.175. Subpart H. [40 CFR 63.168(d)(1)]

Which Months: All Year Statistical Basis: None specified  
Valves in gas/vapor service or light liquid service (Phase III, less than 2 percent leaking valves): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 quarterly, as specified in 40 CFR 63.180(b). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.168(f). Permittee may elect to comply with the alternate standards in 40 CFR 63.168(d)(3) and (d)(4). Subpart H. [40 CFR 63.168(d)(2)]

Which Months: All Year Statistical Basis: None specified  
Valves in gas/vapor service or light liquid service: Determine percent leaking valves using the equation in 40 CFR 63.168(e)(1). Subpart H. [40 CFR 63.168(e)(1)]

Valves in gas/vapor service or light liquid service (after leak repair): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within three months (at least) after repair to determine whether the valve has resumed leaking. Subpart H. [40 CFR 63.168(f)(3)]

Which Months: All Year Statistical Basis: None specified  
Valves in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after a leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.168(f)]

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

- 308 [40 CFR 63.168(h)(1)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.168(b) through (d). Subpart H. [40 CFR 63.168(h)(1)]
- 309 [40 CFR 63.168(h)(2)] Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the valves as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Subpart H. [40 CFR 63.168(h)(2)]
- 310 [40 CFR 63.168(i)(1)] Which Month(s): All Year Statistical Basis: None specified Valves in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the valve cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at anytime in a safe manner. Subpart H. [40 CFR 63.168(i)(1)]
- 311 [40 CFR 63.168(i)(3)] Valves in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the valves at least once per calendar year. Subpart H. [40 CFR 63.168(i)(3)]
- 312 [40 CFR 63.169(a)] Which Month(s): All Year Statistical Basis: None specified Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 within 5 days (calendar) if evidence of a potential leak to the atmosphere is found by visible, audible, olfactory, or any other detection method. If a reading of 10,000 ppm for agitators, 5,000 ppm for pumps handling polymerizing monomers, 2,000 ppm for all other pumps (including pumps in food/medical service), or 500 ppm for valves, connectors, instrumentation systems, and pressure relief devices, or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.169(c). Subpart H. [40 CFR 63.169(a)]
- Which Month(s): All Year Statistical Basis: None specified Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.169(c)]
- 314 [40 CFR 63.170] Surge control vessels and bottoms receivers: Equip with a closed-vent system that routes the organic vapors vented from the surge control vessel or bottoms receiver back to the process or to a control device that complies with the requirements of 40 CFR 63.172, except as provided in 40 CFR 63.162(b), or comply with the requirements of 40 CFR 63.119(b) or (c), if surge control vessel or bottoms receiver is not routed back to the process and meets the conditions specified in 40 CFR 63 Subpart H Table 2 or Table 3. Subpart H.
- VOC or Organic HAP  $\geq$  95 % recovery efficiency, or exit concentration  $\leq$  20 ppmv, whichever is less stringent. Subpart H. [40 CFR 63.172(b)]
- Which Month(s): All Year Statistical Basis: None specified VOC or Organic HAP  $\geq$  95 % reduction efficiency, or exit concentration  $\leq$  20 ppmv, on a dry basis, corrected to 3% oxygen, whichever is less stringent, or residence time  $\geq$  0.50 seconds at a minimum temperature of 760 degrees C. Subpart H. [40 CFR 63.172(c)]
- 317 [40 CFR 63.172(d)] Which Month(s): All Year Statistical Basis: None specified Comply with the requirements of 40 CFR 63.11(b). Subpart H. [40 CFR 63.172(d)]
- 318 [40 CFR 63.172(e)] Monitor control devices to ensure that they are operated and maintained in conformance with their design. Subpart H. [40 CFR 63.172(e)]

**SPECIFIC REQUIREMENTS****AID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER2009006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

319 [40 CFR 63.172(f)(1)(i)]

Closed-vent system (hard-piping): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(i)]

320 [40 CFR 63.172(f)(1)(ii)]

Which Months: All Year Statistical Basis: None specified  
Closed-vent system (hard-piping): Presence of a leak monitored by visual inspection/determination annually. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(1)(ii)]

321 [40 CFR 63.172(f)(2)(i)]

Which Months: All Year Statistical Basis: None specified  
Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(i)]

322 [40 CFR 63.172(f)(2)(ii)]

Which Months: All Year Statistical Basis: None specified  
Closed-vent system (duct work): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once initially according to the procedures in 40 CFR 63.180(b). If an instrument reading greater than 500 ppm above background is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.172(h). Subpart H. [40 CFR 63.172(f)(2)(ii)]

323 [40 CFR 63.172(h)]

Which Months: All Year Statistical Basis: None specified  
Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.172(i). Subpart H. [40 CFR 63.172(h)]

324 [40 CFR 63.172(j)(2)]

Closed-vent system (bypass lines): Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Subpart H. [40 CFR 63.172(j)(2)]

325 [40 CFR 63.172(j)(2)]

Closed-vent system (bypass lines): Seal or closure mechanism monitored by visual inspection/determination monthly to ensure the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line. Subpart H. [40 CFR 63.172(j)(2)]

326 [40 CFR 63.172(k)(1)]

Which Months: All Year Statistical Basis: None specified  
Closed-vent system (unsafe-to-inspect): Demonstrate that the equipment is unsafe to inspect because inspecting personnel would be exposed to an imminent or potential dangers as a consequence of complying with 40 CFR 63.172(f)(1) or (f)(2). Subpart H. [40 CFR 63.172(k)(1)]

327 [40 CFR 63.172(k)(2)]

Closed-vent system (unsafe-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times, but not more frequently than annually. Subpart H. [40 CFR 63.172(k)(2)]

328 [40 CFR 63.172(l)(1)]

Which Months: All Year Statistical Basis: None specified  
Closed-vent system (difficult-to-inspect): Demonstrate that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface. Subpart H. [40 CFR 63.172(l)(1)]

329 [40 CFR 63.172(l)(2)]

Closed-vent system (difficult-to-inspect): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once every five years. Maintain a written plan that requires inspection of the equipment at least once every five years. Subpart H. [40 CFR 63.172(l)(2)]

330 [40 CFR 63.172(m)]

Which Months: All Year Statistical Basis: None specified  
Ensure that the closed-vent system or control device is operating whenever organic HAP emissions are vented to the closed-vent system or control device. Subpart H. [40 CFR 63.172(m)]

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

331 [40 CFR 63.173(a)]

Agitators in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 monthly to detect leaks, as specified in 40 CFR 63.180(b). If an instrument reading of 10,000 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(a)]

332 [40 CFR 63.173(b)]

Which Months: All Year Statistical Basis: None specified  
Agitators in gas/vapor service or light liquid service: Presence of a leak monitored by visual inspection/determination weekly (calendar) for indications of liquids dripping from the agitator. If there are indications of liquids dripping from the agitator, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.173(c). Subpart H. [40 CFR 63.173(b)]

333 [40 CFR 63.173(c)]

Which Months: All Year Statistical Basis: None specified  
Agitators in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after it each leak is detected, except as provided in 40 CFR 63.171. Subpart H. [40 CFR 63.173(c)]

334 [40 CFR 63.173(d)(1)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Operate with the barrier fluid at a pressure that is at all times greater than the agitator stuffing box pressure; or equip with a barrier fluid degassing reservoir that is routed to a process or fuel gas system or connected by a closed-vent system to a control device that complies with the requirements of 40 CFR 63.172; or equip with a closed-loop system that purges the barrier fluid into a process stream. Subpart H. [40 CFR 63.173(d)(1)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Ensure that the barrier fluid is not in light liquid organic HAP service. Subpart H. [40 CFR 63.173(d)(2)]

336 [40 CFR 63.173(d)(3)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Equip barrier fluid system with a sensor that will detect failure of the seal system, barrier fluid system, or both. Subpart H. [40 CFR 63.173(d)(3)]

337 [40 CFR 63.173(d)(4)]

Agitators in gas/vapor service or light liquid service (dual mechanical seal system): Presence of a leak monitored by visual inspection/determination weekly (calendar). Monitor for indications of liquids dripping from the agitator seal. If there are indications of liquid dripping from the agitator seal at the time of the weekly inspection, monitor the agitator as specified in 40 CFR 63.180(b) to determine the presence of organic HAP in the barrier fluid. If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. If a leak is detected, initiate the repair provisions in 40 CFR 63.173(d)(6). Subpart H. [40 CFR 63.173(d)(4)]

338 [40 CFR 63.173(d)(6)(i)]

Which Months: All Year Statistical Basis: None specified  
Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Determine, based on design considerations and operating experience, criteria that indicates failure of the seal system, the barrier fluid system, or both. Subpart H. [40 CFR 63.173(d)(6)(i)]

339 [40 CFR 63.173(d)(6)]

Agitators in gas/vapor service and light liquid service (dual mechanical seal system): Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after the leak is detected, except as provided in 40 CFR 63.171.  
Subpart H. [40 CFR 63.173(d)(6)]

Agitators in gas/vapor service or light liquid service (dual mechanical seal system - sensor): Equipment/operational data monitored by visual inspection/determination daily, or equip with an audible alarm unless the agitator is located within the boundary of an unmanned plant site. If the sensor indicates failure of the seal system, the barrier fluid system, or both based on the criteria established in 40 CFR 63.173(d)(6), a leak is detected. If a leak is detected, initiate repair provisions specified in 40 CFR 63.173(d)(6). Subpart H. [40 CFR 63.173(d)]

Which Months: All Year Statistical Basis: None specified

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

341 [40 CFR 63.173(h)(1)]

Agitators in gas/vapor service or light liquid service (difficult to monitor): Demonstrate that the agitator cannot be monitored without elevating the monitoring personnel more than two meters above a support surface or it is not accessible at anytime in a safe manner. Subpart H. [40 CFR 63.173(h)(1)]

342 [40 CFR 63.173(h)(3)]

Agitators in gas/vapor service or light liquid service (difficult-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Maintain a written plan that requires monitoring of the agitator at least once per calendar year. Subpart H. [40 CFR 63.173(h)(3)]

343 [40 CFR 63.173(j)(1)]

Which Months: All Year Statistical Basis: None specified Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the agitator is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.173(a) through (d). Subpart H. [40 CFR 63.173(j)(1)]

344 [40 CFR 63.173(j)(2)]

Agitators in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of the agitator as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable. Subpart H. [40 CFR 63.173(j)(2)]

345 [40 CFR 63.174(b)(1)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within 12 months after the compliance date, except as provided in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(1)]

346 [40 CFR 63.174(b)(2)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service: Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 once within the first 12 months after initial startup or by no later than 12 months after the date of promulgation of a specific subpart that references 40 CFR 63 Subpart H, whichever is later, except as specified in 40 CFR 63.174(f) through (h). If an instrument reading of 500 ppm or greater is recorded, a leak is detected. If a leak is detected, initiate repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(b)(2)]

347 [40 CFR 63.174(b)(3)(i)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service (less than 0.5% or greater leaking): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 annually. Subpart H. [40 CFR 63.174(b)(3)(ii)]

348 [40 CFR 63.174(b)(3)(ii)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Presence of a leak monitored by 40 CFR 60, Appendix A, Method 21 once every two years. Subpart H. [40 CFR 63.174(b)(3)(ii)]

349 [40 CFR 63.174(c)(1)(i)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service (opened or otherwise had the seal broken): Appendix A, Method 21 within three months after being returned to organic HAP service or when it is reconnected. If monitoring detects a leak, repair according to the provisions of 40 CFR 63.174(d), as specified, except as provided in 40 CFR 63.174(c)(1)(ii). Subpart H. [40 CFR 63.174(c)(1)(i)]

Which Months: All Year Statistical Basis: None specified Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Comply with the requirements of 40 CFR 63.169, Subpart H. [40 CFR 63.174(c)(2)(i)]

**SPECIFIC REQUIREMENTS****AI ID: 2083 - Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

- 351 [40 CFR 63.174(c)(2)(ii)] Connectors in gas/vapor service or light liquid service (2 inches or less in nominal diameter): Organic HAP monitored by technically sound method within three months after being returned to organic HAP service after having been opened or otherwise had the seal broken. If monitoring detects a leak, implement repair provisions in 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(c)(2)(ii)]
- 352 [40 CFR 63.174(d)] Which Months: All Year Statistical Basis: None specified
- Connectors in gas/vapor service or light liquid service: Make a first attempt at repair no later than 5 calendar days after each leak is detected, and complete repairs no later than 15 calendar days after it each leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Subpart H. [40 CFR 63.174(d)]
- 353 [40 CFR 63.174(f)(1)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Demonstrate that the connector is unsafe to monitor because personnel would be exposed to an immediate danger as a result of complying with 40 CFR 63.174(a) through (c). Subpart H. [40 CFR 63.174(f)(1)]
- 354 [40 CFR 63.174(f)(2)] Connectors in gas/vapor service or light liquid service (unsafe-to-monitor): Organic HAP monitored by 40 CFR 60, Appendix A, Method 21 at the regulation's specified frequency. Maintain a written plan that requires monitoring of connectors as frequently as practicable during safe to monitor times, but not more frequently than the periodic schedule otherwise applicable. Subpart H. [40 CFR 63.174(f)(2)]
- 355 [40 CFR 63.174(g)] Which Months: All Year Statistical Basis: None specified
- Connectors in gas/vapor service or light liquid service (unsafe-to-repair): Demonstrate that repair personnel would be exposed to an immediate danger as a consequence of complying with 40 CFR 63.174(d). Subpart H. [40 CFR 63.174(g)]
- 356 [40 CFR 63.174(h)(2)] Connectors in gas/vapor service or light liquid service (inaccessible, ceramic, or ceramic-lined): Make a first attempt at repair within 5 days after leak is detected by visual, audible, olfactory or other means, and complete repairs no later than 15 calendar days after leak is detected, except as provided in 40 CFR 63.171 and 63.174(g). Subpart H. [40 CFR 63.174(h)(2)]
- 357 [40 CFR 63.174(i)] Connectors in gas/vapor service or light liquid service: Calculate percent leaking connectors as specified in 40 CFR 63.174(i)(1) and (i)(2). Subpart H. [40 CFR 63.174(i)]
- 358 [40 CFR 63.175] Comply with applicable requirements for a quality improvement program for valves.
- 359 [40 CFR 63.176] Comply with applicable requirements for a quality improvement program for pumps.
- 360 [40 CFR 63.180] Comply with the test methods and procedures requirements provided in 40 CFR 63.180. Subpart H.
- 361 [40 CFR 63.181] Equipment/operational data recordkeeping by electronic or hard copy at the regulation's specified frequency. Maintain records as specified in 40 CFR 63.181(a) through (k). Subpart H.
- 362 [40 CFR 63.182(b)] Submit Initial Notification: Due within 120 days after the date of promulgation of the subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(b)(1). Subpart H
- Notification submitted with 7/2001 periodic report. [40 CFR 63.182(b)]
- 363 [40 CFR 63.182(c)] Submit Notification of Compliance Status: Due within 90 days of the compliance dates specified in the 40 CFR 63 subpart that references 40 CFR 63 Subpart H. Include the information specified in 40 CFR 63.182(c)(1) through (c)(3). Subpart H. [40 CFR 63.182(c)]
- 364 [40 CFR 63.182(d)] Submit Periodic Reports: Due semiannually starting 6 months after the Notification of Compliance Status, as required in 40 CFR 63.182(c). Include the information specified in 40 CFR 63.182(d)(2) through (d)(4). Subpart H. [40 CFR 63.182(d)]
- 365 [LAC 33:III.2111] Equip all rotary pumps and compressors handling volatile organic compounds having a true vapor pressure of 1.5 psia or greater at handling conditions with mechanical seals or other equivalent equipment.

**SPECIFIC REQUIREMENTS**

AID ID: 2083 - Union Carbide Corp - St Charles Operations  
 Activity Number: PER20090006  
 Permit Number: 476-V2

Air - Title V Regular Permit Renewal

**FUG 0003 46Q - Fugitive Emissions**

366 [LAC 33:III.501.C.6]

**STREAMLINED FUGITIVES PROGRAM**

TABLE 1

Permittee shall comply with a streamlined equipment leaks monitoring program. Compliance with the streamlined program in accordance with this specific condition shall serve to comply with each of the fugitive emission monitoring programs being streamlined, as indicated in Table 1. Noncompliance with the streamlined program in accordance with this specific condition may subject the permittee to enforcement action for one of the applicable fugitive emissions programs.

- a. Streamlined program shall be applicable to the combined universe of components subject to any of the programs being streamlined. Any component type which does not require periodic monitoring under the overall most stringent program shall be monitored as required by the most stringent requirements of any other program being streamlined and will not be exempted. The streamlined program will include any exemptions based on size or component available in any of the programs being streamlined.
- b. Leak definitions and monitoring frequency shall be used based on the overall most stringent program. Percent leaker performance shall be calculated using the provisions of the overall most stringent program. Annual monitoring shall be defined as once every four quarters. Some allowance may be made in the first year on the streamlined program in order to allow for transition from existing monitoring schedules.
- c. Permittee shall comply with recordkeeping and reporting requirements of the overall most stringent program. Semiannual reports shall be submitted on September 30 and March 31, to cover the periods from January 1 through June 30 and July 1 through December 31, respectively. The semiannual reports shall include any monitoring performed within the reporting period. Comply with 40 CFR 60 Subparts VV, and VVa by implementing the Louisiana Consolidated Fugitive Emission Program Guidelines. Compliance is achieved through compliance with 40 CFR 63 Subpart H. See the Streamlined Equipment Leaks Monitoring Program Tables 1 and 2.

367 [LAC 33:III.501.C.6]

**SPECIFIC REQUIREMENTS****AI ID:** 2083 - Union Carbide Corp - St Charles Operations**Activity Number:** PER20090006**Permit Number:** 476-V2**Air - Title V Regular Permit Renewal****FUG 0003 46Q - Fugitive Emissions**

368 [LAC 33:III.501.C.6]

**STREAMLINED FUGITIVES PROGRAM**

TABLE 2

| Unit or Plant Site  | Programs Streamlined  | Stream Applicability | Overall Most Stringent Program |
|---|---|----------------------|--------------------------------|
| Oxide 1<br>Non HON MACT<br>40 CFR 60 Subparts VV, VVa<br>LAC 33:III.2.121 | 40 CFR 63 Subpart H<br>5% VOHAP<br>5% VOHAP<br>10% VOC<br>10% VOC | 40 CFR 60 Subpart H  |                                |

- 369 [LAC 33:III.5107.A.2]  
 LAC 33:III.5105.B.  
 Compliance with NESHAP 40 CFR 63 Subpart H, in accordance with streamlined fugitives monitoring program defined in Tables 1 and 2 of the Specific Requirements, has been determined to be compliance with MACT in accordance with LAC 33:III.5109.A.2.

**UNF 0014 UCC - Oxide I Plant**

- Oxide I Plant shall comply with all applicable provisions in 40 CFR 60 Subpart A.
- 371 [40 CFR 60]  
 372 [40 CFR 63.102(a)]  
 373 [40 CFR 63.103(b)(1)]
- Conduct performance tests and compliance determinations according to the schedule and procedures in 40 CFR 63.7(a) and the applicable sections of 40 CFR 63 Subparts G and H. Subpart F. [40 CFR 63.103(b)(1)]
- 374 [40 CFR 63.103(b)(2)]
- Submit Notification: Due at least 30 calendar days before a performance test is scheduled. Notify DEQ of the intention to conduct a performance test to allow DEQ the opportunity to have an observer present during the test. Subpart F. [40 CFR 63.103(b)(2)]
- 375 [40 CFR 63.103(b)(3)]
- Conduct performance tests according to the provisions in 40 CFR 63.7(e) of subpart A, except conduct performance tests at maximum representative operating conditions for the process. Subpart F. [40 CFR 63.103(b)(3)]
- 376 [40 CFR 63.103(c)(1)]
- Maintain all applicable records in such a manner that they can be readily accessed. Retain the most recent 6 months of records on site or make accessible by computer or other means that provides access within 2 hours after a request. Subpart F. [40 CFR 63.103(c)(1)]
- 377 [40 CFR 63.103(c)(2)]
- Equipment/operational data recordkeeping by electronic or hard copy upon occurrence of event. Maintain records specified in 40 CFR 63.103(c)(2)(i) through (iii), as well as records specified in 40 CFR 63 Subparts G and H. Subpart F. [40 CFR 63.103(c)(2)]
- Keep copies of all applicable reports and records required by 40 CFR 63 Subparts F, G, and H for at least 5 years. If 40 CFR 63 Subparts G or H require records to be maintained for a time period different than 5 years, maintain those records for the time specified in 40 CFR 63 Subparts G or H. Subpart F. [40 CFR 63.103(c)]

**SPECIFIC REQUIREMENTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations

Activity Number: PER2009006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

**UNF 0014 UCC - Oxide I Plant**

379 [40 CFR 63.112(c)]

Demonstrate compliance with the emission standard in 40 CFR 63.112(a) by following the procedures specified in 40 CFR 63.112(e) for all emission points, or by following the emissions averaging compliance approach specified in 40 CFR 63.112(f) for some emission points and the procedures specified in 40 CFR 63.112(e) for all other emission points within the source. Subpart G

380 [40 CFR 63.112(e)(1)]

UCC is complying with 40 CFR 63.112(e). [40 CFR 63.112(c)]

The owner or operator using 40 CFR 63.112(e) compliance approach shall also comply with the requirements of 40 CFR 63.151 and 40 CFR

381 [40 CFR 63.112(e)(2)]

63.152 of this subpart, as applicable. Subpart G. [40 CFR 63.112(e)(1)]

The owner or operator using 40 CFR 63.112(e) compliance approach is not required to calculate the annual emission rate specified in paragraph

(a) of this section. Subpart G

[40 CFR 63.112(e)(2)]

When emissions of different kinds (e.g., emissions from process vents, transfer operations, storage vessels, process wastewater, and/or in-process equipment subject to 40 CFR 63.149 of this subpart) are combined, and at least one of the emission streams would be classified as Group 1 in the absence of combination with other emission streams, the owner or operator shall comply with the requirements of either paragraph (e)(3)(i) or paragraph (e)(3)(ii) of this section. Subpart G

[40 CFR 63.112(e)(3)]

The owner or operator of an existing or new source may comply with the process vent provisions in 40 CFR 63.113 through 63.118 of this subpart, the storage vessel provisions in 40 CFR 63.119 through 63.123 of this subpart, the transfer operation provisions in 40 CFR 63.126 through 63.130 of this subpart, the wastewater provisions in 40 CFR 63.131 through 63.147 of this subpart, the leak inspection provisions in 40 CFR 63.148, and the provisions in 40 CFR 63.149 of this subpart. Subpart G. [40 CFR 63.112(e)]

384 [40 CFR 63.151(b)]

Submit Initial Notification: Due in writing within 120 calendar days after the date of promulgation of 40 CFR 63 Subpart G. Include the information specified in 40 CFR 63.151(b)(1)(i) through (b)(1)(v). Subpart G. [40 CFR 63.151(b)]

385 [40 CFR 63.152(c)]

Submit Periodic Reports: Due semiannually no later than 60 calendar days after the end of each 6-month period, except as specified in 40 CFR

386 [40 CFR 63.]

63.152(c)(5) and (c)(6). Submit the first report no later than 8 months after the date the Notification of Compliance Status is due. Include the information specified in 40 CFR 63.152(c)(2) through (c)(4). Subpart G. [40 CFR 63.152(c)]

Oxide I Plant shall comply with all applicable provisions in 40 CFR 63 Subpart A.

Permittee will be allowed to operate the Oxide I Plant under Permit No. 476-V1 until that time when the construction for the SCO EO Refining Expansion Project, permitted under Permit No. 472-V2, is finished and operational. When the SCO EO Refining Expansion Project is finished and operational, Permit No. 472-V1 will no longer be effective and the permittee shall be in compliance with all conditions under Permit No. 472-V2. Comply with the Part 70 General Conditions as set forth in LAC 33:III.535 and the Louisiana General Conditions as set forth in LAC 33:III.537. [LAC 33:III.535, LAC 33:III.537]

## EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 2083 - Union Carbide Corp - St Charles Operations

Activity Number: PER20090006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

| Emission Pt.     | Pollutant          | Avg lb/hr | Max lb/hr | Tons/Year |
|------------------|--------------------|-----------|-----------|-----------|
| EQT 0111<br>27   | 1,2-Dichloroethane | 0.001     | 0.001     | <0.001    |
|                  | Chloroethane       | 0.003     | 0.003     | <0.01     |
|                  | Ethylene oxide     | 0.951     | 0.951     | 0.011     |
|                  | Vinyl chloride     | 0.001     | 0.001     | <0.01     |
| EQT 0114<br>46K  | Ethylene oxide     | 7.96      | 7.96      | 0.477     |
| EQT 0116<br>46L  | Ethylene oxide     | 0.008     | 0.008     | 0.035     |
| EQT 0117<br>46M  | 1,2-Dichloroethane | <0.001    | <0.001    | <0.001    |
|                  | 1,4-Dioxane        | <0.001    | 0.001     | <0.01     |
|                  | Acetaldehyde       | 0.02      | 0.14      | 0.10      |
|                  | Chloroethane       | <0.001    | 0.019     | <0.01     |
|                  | Ethylene glycol    | <0.001    | <0.001    | <0.01     |
|                  | Ethylene oxide     | 0.031     | 24.139    | 0.135     |
|                  | Hydrochloric acid  | 0.01      | 2.02      | 0.02      |
|                  | Vinyl chloride     | <0.001    | 0.01      | <0.01     |
| EQT 0120<br>46R  | 1,2-Dichloroethane | <0.001    | <0.001    | <0.001    |
|                  | Chloroethane       | <0.001    | <0.001    | <0.01     |
|                  | Ethylene oxide     | 0.001     | <0.001    | 0.006     |
|                  | Vinyl chloride     | <0.001    | <0.001    | <0.01     |
| EQT 0122<br>2200 | Naphthalene        | 0.001     |           | <0.01     |
| FUG 0003<br>46Q  | 1,2-Dichloroethane | <0.001    |           | 0.001     |
|                  | 1,4-Dioxane        | <0.001    |           | <0.01     |
|                  | Acetaldehyde       | <0.001    |           | <0.01     |
|                  | Chloroethane       | <0.001    |           | <0.01     |
|                  | Ethylene glycol    | 0.16      |           | 0.71      |
|                  | Ethylene oxide     | 0.433     |           | 1.896     |
|                  | Formaldehyde       | <0.001    |           | <0.01     |
|                  | Naphthalene        | 0.04      |           | 0.16      |
|                  | Vinyl chloride     | <0.001    |           | <0.01     |
| UNF 0014<br>UCC  | 1,2-Dichloroethane |           |           | 0.001     |
|                  | 1,4-Dioxane        |           |           | <0.01     |
|                  | Acetaldehyde       |           |           | 0.10      |
|                  | Chloroethane       |           |           | <0.01     |
|                  | Ethylene glycol    |           |           | 0.71      |

**EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations

Activity Number: PER20090006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

| Emission Pt.    | Pollutant         | Avg lb/hr | Max lb/hr | Tons/Year |
|-----------------|-------------------|-----------|-----------|-----------|
| UNF 0014<br>UCC | Ethylene oxide    |           |           | 2.56      |
|                 | Formaldehyde      |           |           | <0.01     |
|                 | Hydrochloric acid |           |           | 0.02      |
|                 | Naphthalene       |           |           | 0.16      |
|                 | Vinyl chloride    |           |           | <0.01     |

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote. Emission rates attributed to the UNF reflect the sum of the TAP/HAP limits of the individual emission points (or caps) under this permit, but do not constitute an emission cap.

**EMISSION RATES FOR CRITERIA POLLUTANTS**

AI ID: 2083 - Union Carbide Corp - St Charles Operations

Activity Number: PER20090006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

| Subject Item         | CO        |           |           | NOx       |           |           | PM10      |           |           | SO2       |           |           | VOC       |           |           |
|----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                      | Avg lb/hr | Max lb/hr | Tons/Year |
| <b>Oxide I Plant</b> |           |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| EQT 0111<br>27       |           |           |           |           |           |           |           |           |           |           |           |           | 93.92     | 93.92     | 1.13      |
| EQT 0114<br>48K      |           |           |           |           |           |           |           |           |           |           |           |           | 105.25    | 105.25    | 6.32      |
| EQT 0116<br>48L      |           |           |           |           |           |           |           |           |           |           |           |           | 0.11      | 0.11      | 0.46      |
| EQT 0117<br>48M      | 7.23      | 1164.12   | 31.66     | 1.33      | 213.95    | 5.82      | 0.05      | 7.13      | 0.20      | 0.01      | 1.71      | 0.05      | 3.73      | 727.82    | 16.32     |
| EQT 0118<br>48N      |           |           |           |           |           |           |           |           |           |           |           |           | 49.05     | 49.05     | 0.98      |
| EQT 0119<br>48P      |           |           |           |           |           |           |           |           |           |           |           |           | 0.04      | 0.04      | 0.16      |
| EQT 0120<br>48R      |           |           |           |           |           |           |           |           |           |           |           |           | 0.13      | 0.13      | 0.59      |
| EQT 0122<br>2200     |           |           |           |           |           |           |           |           |           |           |           |           | 0.01      | 0.01      | 0.03      |
| EQT 0123<br>2201     |           |           |           |           |           |           |           |           |           |           |           |           | <0.01     |           |           |
| EQT 1070<br>2203     |           |           |           |           |           |           |           |           |           |           |           |           | 0.001     |           |           |
| FUG 0003<br>48Q      |           |           |           |           |           |           |           |           |           |           |           |           | 1.07      |           |           |
|                      |           |           |           |           |           |           |           |           |           |           |           |           | 2.43      |           |           |
|                      |           |           |           |           |           |           |           |           |           |           |           |           | 10.63     |           |           |

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals unless otherwise noted in a footnote.

**General Information**

**AI ID:** 2003 Union Carbide Corp - St Charles Operations  
**Activity Number:** PER2009006  
**Permit Number:** 476-V2  
**Air - Title V Regular Permit Renewal**

| Also Known As: | ID         | Name                                      | User Group                             | Start Date |
|----------------|------------|---|--|------------|
|                | 2520-00001 | Union Carbide Corp - Taft Star Plant      | CDS Number                             | 01-03-1990 |
| 13-1421730     |            | Federal Tax ID                            | Federal Tax ID                         | 11-21-1999 |
| LAD041581422   |            | Union Carbide Corp SCO Taft/Star          | Hazardous Waste Notification           | 08-18-1980 |
| PMT/PC         |            | GPRAs Baselines                           | Hazardous Waste Permitting             | 10-01-1997 |
| LAD041581422   |            | Union Carbide                             | Inactive & Abandoned Sites             | 06-08-1981 |
| LA0000191      |            | LPDES #                                   | LPDES Permit #                         | 05-22-2003 |
| LAR10C313      |            | LPDES #                                   | LPDES Permit #                         | 12-12-2004 |
| LAR10C447      |            | LPDES #                                   | LPDES Permit #                         | 12-12-2004 |
| 50152          |            | ORIS Code                                 | ORIS Code                              | 09-16-2008 |
|                |            | Priority 1 Emergency Site                 | Priority 1 Emergency Site              | 07-18-2006 |
|                |            | Radioactive Material License              | Radiation License Number               | 07-06-2001 |
|                |            | X-Ray Registration Number                 | Radiation X-ray Registration Number    | 11-21-1999 |
|                |            | Site ID #                                 | Solid Waste Facility No.               | 04-30-2001 |
| LA-2163-L01    |            | Union Carbide Chemicals & Plastics        | TEMPO Merge                            | 10-17-2001 |
| 2163           |            | Dow Union Carbide - St Charles Operations | TEMPO Merge                            | 06-30-2002 |
| GD-089-1324    |            | Union Carbide Corp - Hahnville Plant      | TEMPO Merge                            | 10-17-2001 |
| 17809          |            | Union Carbide Corp - Star Plant           | TEMPO Merge                            | 07-15-2001 |
| 19135          |            | Union Carbide Corp                        | TEMPO Merge                            | 11-01-2000 |
| 34610          |            | Union Carbide Corp                        | TEMPO Merge                            | 07-15-2001 |
| 35033          |            | Union Carbide Corp                        | TEMPO Merge                            | 07-15-2001 |
| 3832           |            | Union Carbide Corp                        | TEMPO Merge                            | 07-15-2001 |
| 38779          |            | Union Carbide Corp                        | TEMPO Merge                            | 07-15-2001 |
| 38780          |            | Union Carbide Corp                        | TEMPO Merge                            | 07-15-2001 |
| 38882          |            | Union Carbide Corp Taft Plant             | TEMPO Merge                            | 07-22-2001 |
| 44903          |            | Union Carbide Chemical & Plastics         | TEMPO Merge                            | 09-05-2001 |
| 45881          |            | Union Carbide                             | TEMPO Merge                            | 11-07-2001 |
| 8533           |            | Dow Chemical                              | TEMPO Merge                            | 10-17-2001 |
| 89428          |            | Union Carbide Star                        | Toxic Release Inventory                | 07-30-2004 |
| 9651           |            | TRI #                                     | UST Facility ID (from UST legacy data) | 10-12-2002 |
| 45011610       |            | UST FID #                                 |  |            |

**Physical Location:** 355 Hwy 3142 Gate 2B  
Taft, LA 70057

**Mailing Address:** PO Box 50  
Hahnville, LA 700570050

**Main Phone:** 9857834411

TPOR0148

Page 1 of 3

General Information

AI ID: 2083 Union Carbide Corp - St Charles Operations

Activity Number: PER20090006

Permit Number: 476-V2

Air - Title V Regular Permit Renewal

Location of Front Gate: 29.982289 latitude, -90.455622 longitude. Coordinate Method: Lat/Long - DMS. Coordinate Datum: NAD83

## Related People:

| Name                        | Mailing Address                   | Phone (Type)     | Relationship                          |
|-----------------------------|-----------------------------------|------------------|---------------------------------------|
| Tim Brady                   | PO Box 50 Hahnville, LA 700570050 | 9857834813 (WP)  | Emission Inventory Contact for        |
| Tim Brady                   | PO Box 50 Hahnville, LA 700570050 | BRADYTD@DOW.C    | Emission Inventory Contact for        |
| Emergency Operations Center | PO Box 50 Hahnville, LA 70057     | 9857834387 (WP)  | Katrina Response Contact for          |
| Percy Gasery                | PO Box 50 Hahnville, LA 700570050 | 9857834315 (WP)  | Radiation Safety Officer for          |
| Percy Gasery                | PO Box 50 Hahnville, LA 700570050 | 9857834315 (WP)  | Radiation Contact For                 |
| Eric Kilian                 | PO Box 50 Hahnville, LA 700570050 | 9857834241 (WP)  | Accident Prevention Billing Party for |
| Eric Kilian                 | PO Box 50 Hahnville, LA 700570050 | 9857835423 (WF)  | Accident Prevention Billing Party for |
| Responsible Care Leader     | PO Box 50 Hahnville, LA 700570050 | 9857834411 (WP)  | Air Permit Contact For                |
| Responsible Care Leader     | PO Box 50 Hahnville, LA 700570050 | 9857834411 (WP)  | Responsible Official for              |
| Sarah Thigpen               | PO Box 50 Hahnville, LA 700700050 | 9857835423 (WF)  | Accident Prevention Contact for       |
| Sarah Thigpen               | PO Box 50 Hahnville, LA 700700050 | thigpest@dow.com | Accident Prevention Contact for       |
| Sarah Thigpen               | PO Box 50 Hahnville, LA 700700050 | 9857835835 (WP)  | Accident Prevention Contact for       |

## Related Organizations:

| Name  | Address                           | Phone (Type)    | Relationship                             |
|---|-----------------------------------|-----------------|--|
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Operates                                 |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Emission Inventory Billing Party         |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Owns                                     |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Owns                                     |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Radiation Registration Billing Party for |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Radiation Registration Billing Party for |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Water Billing Party for                  |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Water Billing Party for                  |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Air Billing Party for                    |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Air Billing Party for                    |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Solid Waste Billing Party for            |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Solid Waste Billing Party for            |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Radiation License Billing Party for      |
| Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Radiation License Billing Party for      |

**General Information****AI ID: 2083 Union Carbide Corp - St Charles Operations****Activity Number: PER20090006****Permit Number: 476-V2****Air - Title V Regular Permit Renewal**

| Related Organizations:                          | Name  | Address                           | Phone (Type)    | Relationship                          |
|---|---|-----------------------------------|-----------------|---------------------------------------|
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Accident Prevention Billing Party for |
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Accident Prevention Billing Party for |
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | UST Billing Party for                 |
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | UST Billing Party for                 |
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857834387 (WP) | Emission Inventory Billing Party      |
| Union Carbide Corporation St Charles Operations | Union Carbide Corporation St Charles Operations | PO Box 50 Hahnville, LA 700570050 | 9857833454 (WF) | Operates                              |

**Note: This report entitled "General Information" contains a summary of facility-level information contained in LDEQ's TEMPO database for this facility and is not considered a part of the permit. Please review the information contained in this document for accuracy and completeness. If any changes are required or if you have questions regarding this document, you may contact Ms. Tommie Milam, Permit Support Services Division, at (225) 219-3259 or email your changes to facupdate@la.gov.**